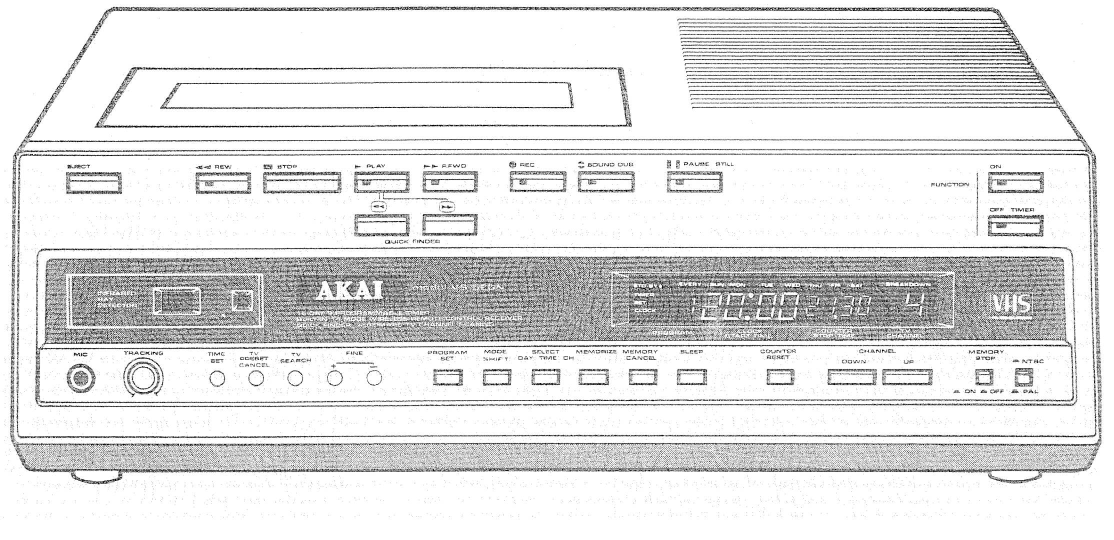
AKAI SERVICE MANUAL


EJECT
REW
STOP
PLAY
F.FWD
REC
SOUND DUB
PAUSE STILL
FUNCTION
ON
OFF TIMER
QUICK FINDER
INFRARED RAY DETECTOR
AKAI
VHS
MIC
TRACKING
TIME SET
TV PRESET CANCEL
TV SEARCH
FINE
PROGRAM SET
MODE SHIFT
SELECT DAY TIME CH
MEMORIZE
MEMORY CANCEL
SLEEP
COUNTER RESET
CHANNEL DOWN UP
MEMORY STOP
ON OFF
NTSC
PAL

VIDEO CASSETTE RECORDER

MODEL VS-5EGN/EA/EO

AKAI
VS-5
TRIPLE SYSTEM
VHS
6 20:00 2 10:0
FUNCTION

VIDEO CASSETTE RECORDER

MODEL VS-5EGN/EA/EO

THIS MANUAL IS MUST BE USED AS A SET TOGETHER WITH SEPARATELY PUBLISHED
VS-5EG/EK SERVICE MANUAL AND PARTS LIST

SECTION 1 SERVICE MANUAL 3
SECTION 2 PARTS LIST 29
SECTION 3 SCHEMATIC DIAGRAM 32

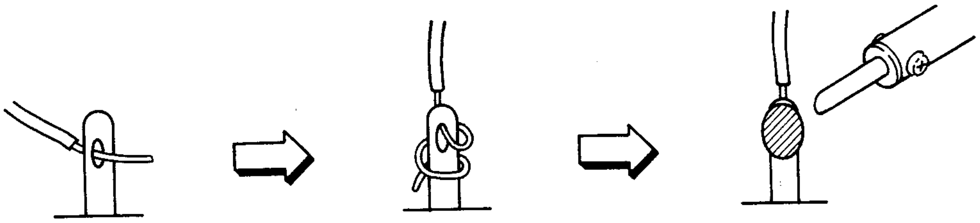
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for $\boxed{C}$ or $\boxed{A}$, specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SECTION 1

SERVICE MANUAL

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  2. MEASUREMENT EQUIPMENTS 6
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I . SPECIFICATIONS

1. MODEL VS-5EGN

FORMAT	VHS PAL standard
VIDEO RECORDING SYSTEM	Rotary, slant azimuth two-head helical scan system
VIDEO SIGNAL SYSTEMS	PAL colour (System B,G) and CCIR monochrome signals, 625 lines SECAM colour (System B, G) and CCIR monochrome signals, 625 lines
TAPE WIDTH	12.7 mm
TAPE SPEED	
NORMAL	23.39 mm/sec
FF/REW	4 min. (AKAI E-240 cassette)
QUICK FINDER	approx. 9 times normal speed
RECORDING SPEED	240 min. (AKAI E-240 cassette)
POWER REQUIREMENTS	220V/110V (VS-5EGN), AC selectable, 50 Hz, 37 Watts (including video timer)
OPERATING TEMPERATURE	5°C to 40° C
AERIAL INPUT	VHF Band I, Ch 2 to 4 VHF Band III, Ch 5 to 12 UHF Band IV/V, Ch 21 to 69
AERIAL OUTPUT	UHF channels 30 to 39 (adjustable) Set to channel 36 prior to shipment.
VIDEO SIGNAL	
INPUT	0.5 to 2.0 Vp-p/75 ohms (video/sync ratio should be normal)
OUTPUT	1.0 Vp-p/75 ohms
S/N	more than 43 dB
HORIZONTAL RESOLUTION	more than 250 lines
AUDIO SIGNAL INPUT	
MIC	–70 dBs/high impedance unbalanced
LINE	–20 dBs/50 kohms unbalanced
AUDIO SIGNAL OUTPUT	–6 dBs/less than 1 kohms unbalanced
S/N	more than 40 dB
FREQUENCY RESPONSE	70 Hz to 8 kHz
VIDEO TIMER	
CLOCK DISPLAY	24 hour fluorescent digital display
CLOCK REFERENCE	locked to power line frequency, 50/60 Hz self select
NUMBER OF PROGRAMS	9 programs possible: five 14 days one time memory programs two every day programs two every week programs Sleeper operation possible.
DIMENSIONS	440 (W) x 133 (H) x 398 (D) mm (17.3 x 5.2 x 15.7 inches)
WEIGHT	12 kg (26.4 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

2. MODEL VS-5EA/EO

FORMAT	VHS PAL standard
VIDEO RECORDING SYSTEM	Rotary, slant azimuth two-head helical scan system
VIDEO SIGNAL SYSTEM	PAL colour and CCIR monochrome signals, 625 lines
TAPE WIDTH	12.7 mm
TAPE SPEED	
NORMAL	23.39 mm/sec
FF/REW	4 min. (AKAI E-240 cassette)
QUICK FINDER	approx. 9 times normal speed
RECORDING SPEED	240 min. (AKAI E-240 cassette)
POWER REQUIREMENTS	220V/110V (EO), 200V/240V (EA) AC selectable, 50 Hz, 37 Watts (including video timer)
OPERATING TEMPERATURE	5° C to 40° C
AERIAL INPUT	
VS-5EA	VHF Low 0 to 5 (45 to 108 MHz) VHF High 5A to 11 (137 to 225 MHz) UHF 21 to 69 (470 to 802 MHz)
VS-5EO	VHF Low Channel 2 to Channel M2 (47 to 118 MHz) VHF High Channel M3 to Channel M10 (118 to 300 MHz) UHF 21 to 69 (470 to 862 MHz)
AERIAL OUTPUT	
VS-5EO	UHF channels 30 to 39 (adjustable) Set to channel 36 prior to shipment.
VS-5EA	VHF channel 3 or 4 (switchable) Set to channel 4 prior to shipment.
VIDEO SIGNAL	
INPUT	0.5 to 2.0 Vp-p/75 ohms (video/sync ratio should be normal)
OUTPUT	1.0 Vp-p/75 ohms
S/N	more than 43 dB
HORIZONTAL RESOLUTION	more than 280 lines (PAL) more than 240 lines (B.G.SECAM)
AUDIO SIGNAL INPUT	
MIC	–70 dBs/high impedance unbalanced
LINE	–20 dBs/50 kohms unbalanced
AUDIO SIGNAL OUTPUT	–6 dBs/less than 1 kohms unbalanced
S/N	more than 40 dB
FREQUENCY RESPONSE	70 Hz to 8 kHz
VIDEO TIMER	
CLOCK DISPLAY	24 hour fluorescent digital display
CLOCK REFERENCE	locked to power line frequency, 50/60 Hz self select
NUMBER OF PROGRAMS	9 programs possible: five 14 days one time memory programs two every day programs two every week programs Sleeper operation possible.
DIMENSIONS	440 (W) x 133 (H) x 398 (D) mm (17.3 x 5.2 x 15.7 inches)
WEIGHT	12 kg (26.4 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

II . STANDARD TEST TAPES & MEASUREMENT EQUIPMENTS

1. STANDARD TEST TAPES

PARTS NO.	DESCRIPTION	RECORDED SIGNAL
TF-508RF	Reference Tape (PAL, SECAM)	Video: Stair Step Audio: 6,000 Hz (30 min.)
TF-510CB	Color Bar Tape (PAL)	Video: Split Color Bar Audio: None
TF-513LS	Audio Level and Speed/W&F Check Tape (PAL, SECAM)	Video: None Audio: 1,000 Hz (15 min.) & 3,000 Hz (15 min.)
TF-515SW	RF Sweep Tape (PAL, SECAM)	Video: 0.1 ~ 6.5 MHz Sweep Marker: 2.0, 4.0, 5.0 MHz Audio: None
TF-509RF	Reference Tape (NTSC)	Video: Stair Step Audio: 6,000 Hz (30 min.)
TF-511CB	Color Bar Tape (NTSC)	Video: Split Color Bar Audio: None

2. MEASUREMENT EQUIPMENTS

1) Oscilloscope: Wide-band, Dual-trace
2) Standard Signal Generator: PAL
3) Frequency Counter
4) Digital Voltmeter
5) Distortion Meter
6) Wow & Flutter Meter
7) Audio Oscillator

III. ELECTRICAL ADJUSTMENT

1. MODEL VS-5EGN

As the adjustments for the PAL mode of VS-5EGN is the same as the adjustment of VS-5EG, please refer to the Service Manual of VS-5EG/EK. After making adjustment for PAL mode, adjust for NTSC mode.

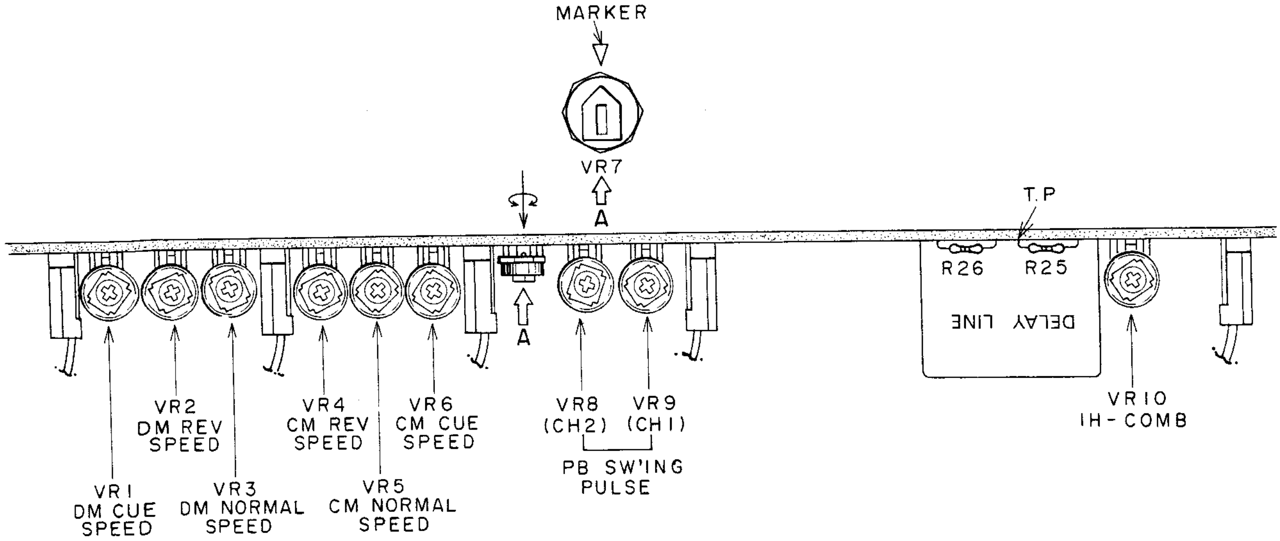
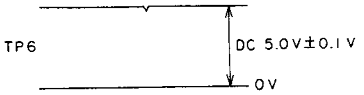
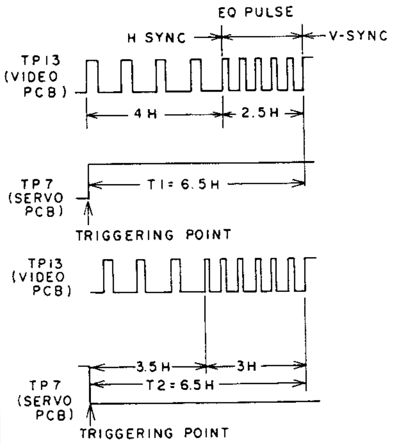
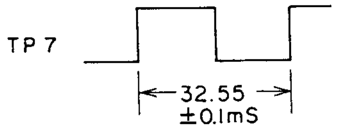
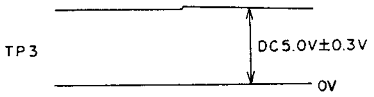
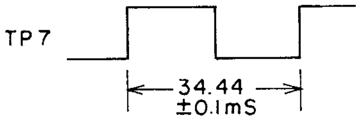
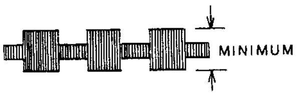

MARKER
VR7
A
T.P
R26
R25
DELAY LINE
A
VR2
DM REV
SPEED
VR4
CM REV
SPEED
VR6
CM CUE
SPEED
VR8
(CH2)
VR9
(CH1)
PB SW'ING
PULSE
VR10
1H-COMB
VR1
DM CUE
SPEED
VR3
DM NORMAL
SPEED
VR5
CM NORMAL
SPEED

Fig. 1

Step	Adjustment Item	Input	Mode	Test Point	Adjustment Parts	Result & Remarks
1	Drum Motor Normal Speed	Test Tape (TF-509RF)	PB	TP6 (Servo PCB)	VR3	 TP6 DC 5.0V±0.1V 0V Adjust so that the drum servo phase error voltage is within DC 5.0V±0.1V.
2	Capstan Motor Normal Speed	Test Tape (TF-509RF)	PB	TP3 (Servo PCB)	VR5	TP3 DC 5.0V±0.2V 0V Adjust so that the capstan servo phase error voltage is within DC 5.0 V ± 0.2 V
3	PB Switching point	Test Tape (TF-509RF)	PB	TP13 (Video PCB) TP7 (Servo PCB)	VR9 (CH1) VR8 (CH2) (VR7 is set to marker position)	 EQ PULSE H SYNC V-SYNC TP13 (VIDEO PCB) 4H 2.5H TP7 (SERVO PCB) T1 = 6.5H TRIGGERING POINT TP13 (VIDEO PCB) 3.5H 3H T2 = 6.5H TP7 (SERVO PCB) TRIGGERING POINT Adjust T1 with TR2 to 6.5H and T2 to 6.5H with VR3. The Difference between T1 and T2 should be within 1H.

Step	Adjustment Item	Input	Mode	Test Point	Adjustment Parts	Result & Remarks
4	Drum Motor Cue Speed	Test Tape (TF-509RF)	PB	TP7 (Servo PCB)	VR1	 Adjust so that the switching pulse width is within 32.55 mS ± 0.1 mS (2.34% increase in speed).
5	Capstan Motor Cue Speed	Test Tape (TF-509RF)	PB	TP3 (Servo PCB)	VR10	 Adjust so that the capstan servo phase error voltage is within DC 5.0 V ± 0.3 V.
6	Drum Motor Review Speed	Test Tape (TF-509RF)	PB	TP7 (Servo PCB)	VR2	 Adjust so that the switching pulse width is within 34.44 mS ± 0.1 mS (3.31% decrease in speed).
7	Capstan Motor Review Speed	Test Tape (TF-509RF)	PB	TP3 (Servo PCB)	VR4	TP3 DC5.0V±0.3V 0V Adjust so that the capstan servo phase error voltage is within DC 5.0 V ± 0.3 V.
8	Comb Filter	Test Tape (TF-511CB)	PB	TP (EGN PCB)	VR10	 To adjust minimum

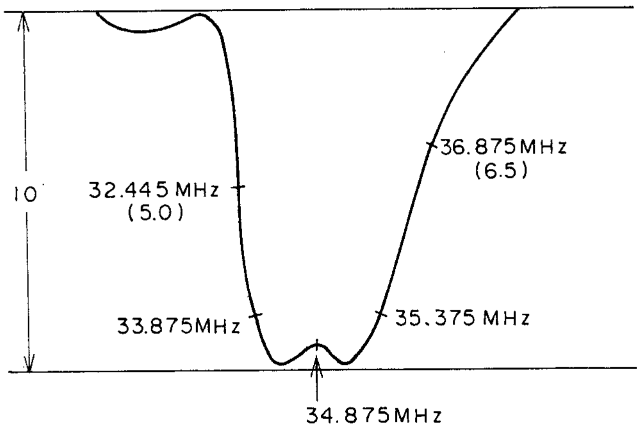
Note: 1. Set EXT-Tracking Volume to Click Position.
2. Set NTSC/PAL Playback Selector Switch to NTSC Mode.

2. MODEL VS-5EA/EO

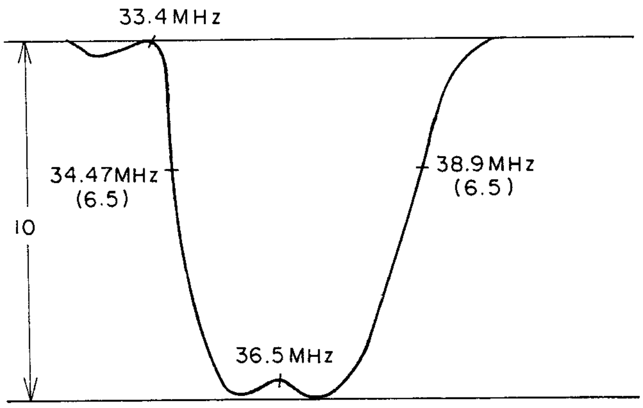
As everything about VS-5EA/EO except the VIF Adjustment of Tuner Block is the same as the VS-5EG, please refer to the Service Manual of VS-5EG/EK except for the VIF Adjustment.

VIF Adjustment

It is the same as the VIF Adjustment in the Service Manual of VS-5EG/EK, except that the waveform in the Fig. 137 is changed to as below.



(a) VS-5EA



(b) VS-5EO

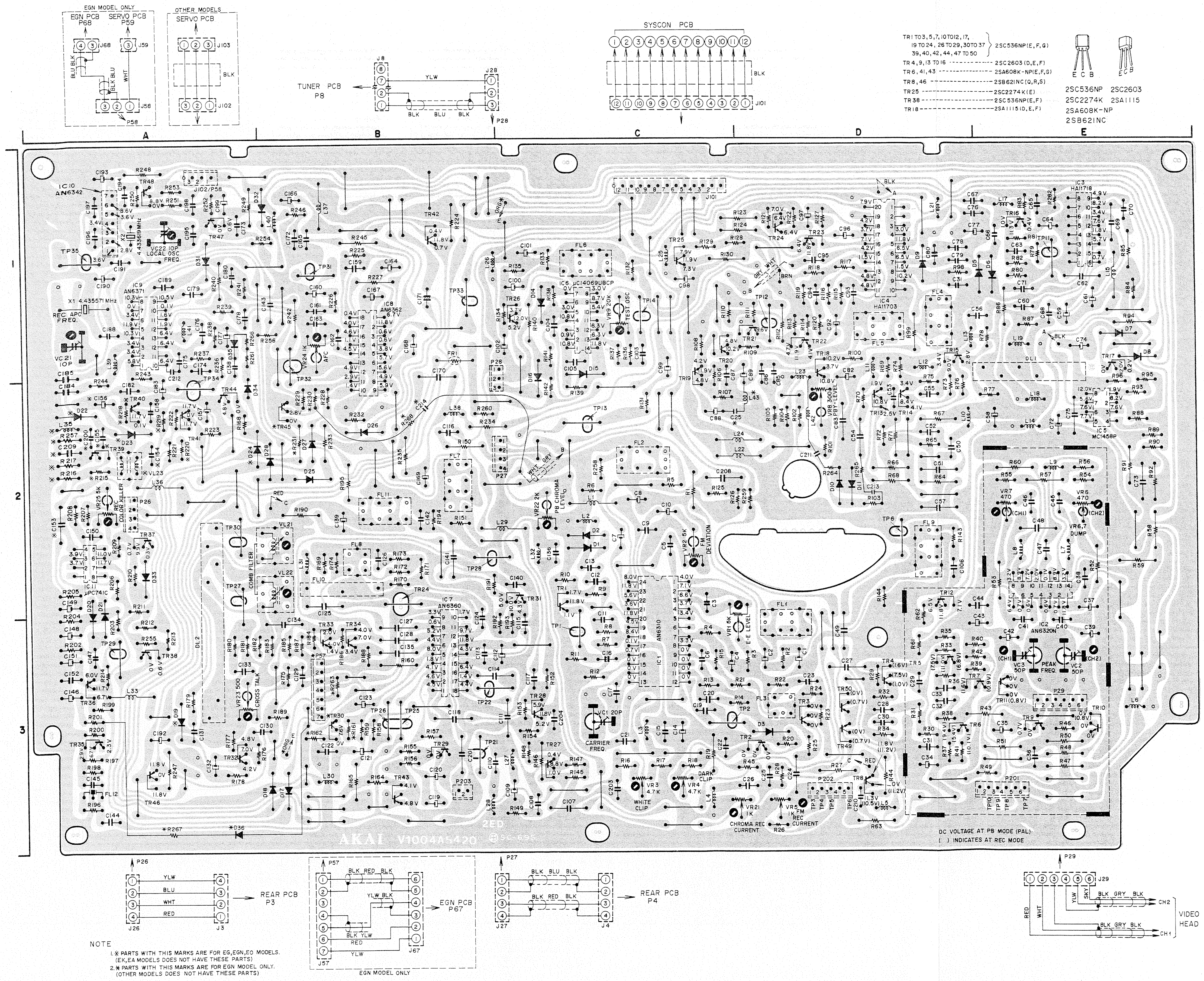
Fig. 2

IV. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

P.C BOARD TITLE	P.C BOARD NUMBER
Video P.C Board	V1004A5420
Audio P.C Board	V1004A5350
Servo P.C Board	V1004A5340
Syscon P.C Board	V1004A5341
Display P.C Board	V1004A5440
Drive P.C Board	V1004B5360
Capstan Motor P.C Board	V1004B5491
Drum Motor P.C Board	V1004B5490
Rear P.C Board	V1004C5390
Mic P.C Board	V1004C5380
Memory P.C Board	V1004C5381
Sensor P.C Board	V1004C5370
Audio Head P.C Board	V1004D5410
Full Erase P.C Board	V1004D5411
Motor Filter P.C Board	V1004D5400
CM Filter P.C Board	V1004D5500
Power Supply P.C Board	KA240178
Power Sub P.C Board	
TR P.C Board	
Tuner P.C Board	
R.S SW P.C Board	V1004C5371
SW A P.C Board	V1004C5372
SW B P.C Board	V1004C5373
EJ. S SW P.C Board	V1004C5374
Lower Drum P.C Board	VS-8068
Upper Drum P.C Board	VS-8012
EGN P.C Board (VS-5 EGN only)	V1004B5520

V. COMPOSITION OF VARIOUS P.C BOARDS

1. Video P.C Board (PAL) V1004A5420 (2ED) (EGN/EA/EO)


EGN MODEL ONLY
EGN PCB P68
SERVO PCB P59
J68
J59
J56
P58
BLU
BLK
WHT
OTHER MODELS
SERVO PCB
J103
J102
TUNER PCB P8
J8
J28
YLW
BLK
BLU
P28
SYSCON PCB
J101
TR1 TO3, 5, 7, 10TO12, 17, 19 TO 24, 26 TO29, 30TO 37 39, 40, 42, 44, 47 TO 50 — 2SC536NP(E, F, G)
TR 4, 9, 13 TO 16 ------------ 2SC2603 (D, E, F)
TR 6, 41, 43 --------------- 2SA608K-NP(E, F, G)
TR8, 46 ----------------- 2SB621NC(Q, R, S)
TR25 -------------------- 2SC2274K(E)
TR 38 -------------------- 2SC536NP(E, F)
TR18 --------------------- 2SA1115(D, E, F)
E C B
E C B
2SC536NP 2SC2603
2SC2274K 2SA1115
2SA608K-NP
2SB621NC
A
B
C
D
E
1
2
3
IC10 AN6342
IC9 AN6371
IC8 AN6362
IC6 μC14069UBCP
IC4 HA11703
IC3 HA11718
IC5 MC1458P
IC7 AN6360
IC1 AN6310
IC2 AN6320N
IC11 μPC741C
X1 4.433571MHz
X2 4.433619MHz
VC22 10P LOCAL OSC FREQ.
VC21 10P REC APC FREQ.
VR25 5K COLOR KILLER
VR9 20K TEST OSC
VR8 300 PB Y-LEVEL
VR22 2K PB CHROMA LEVEL
VR2 5K FM DEVIATION
VR1 5K E-E LEVEL
VR7 470 (CH1)
VR6 470 (CH2)
VR6,7 DUMP
VC3 50P
VC2 50P
PEAK FREQ
VC1 20P CARRIER FREQ.
VR3 4.7K WHITE CLIP
VR4 4.7K DARK CLIP
VR21 1K CHROMA REC CURRENT
VR5 5K FM REC CURRENT
VR23 500 CROSS TALK
VL21 COMB FILTER
AKAI V1004A5420
2ED
DC VOLTAGE AT PB MODE (PAL)
( ) INDICATES AT REC MODE
P26
YLW
BLU
WHT
RED
J26
J3
REAR PCB P3
P57
BLK RED BLK
YLW BLK
BLK YLW
RED
YLW
J57
J67
EGN PCB P67
EGN MODEL ONLY
P27
BLK BLU BLK
BLK RED BLK
J27
J4
REAR PCB P4
P29
J29
RED
WHT
YLW
SKY
BLK GRY BLK
CH2
CH1
VIDEO HEAD

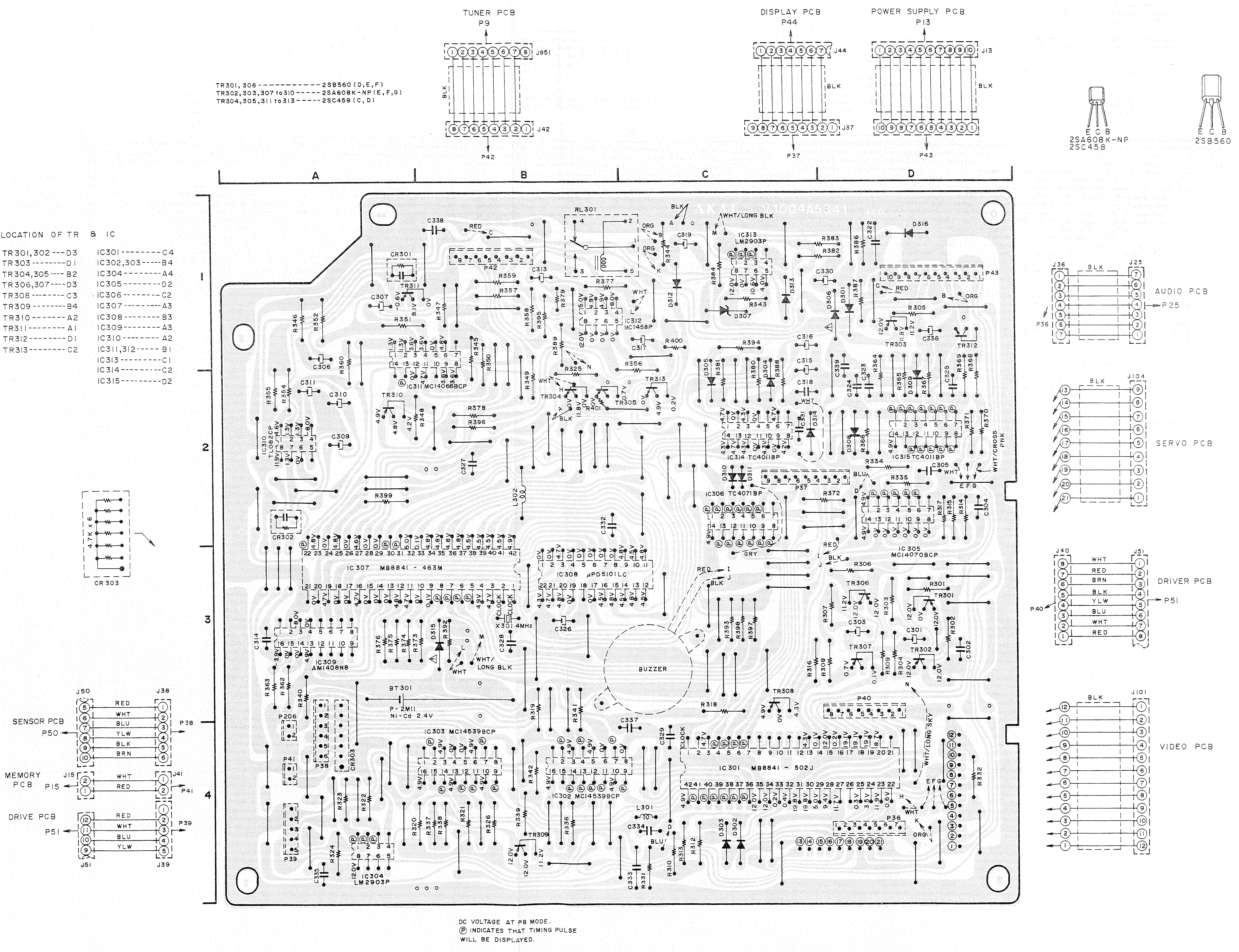
NOTE

1. ※ PARTS WITH THIS MARKS ARE FOR EG, EGN, EO MODELS. (EK, EA MODELS DOES NOT HAVE THESE PARTS)
2. ✳ PARTS WITH THIS MARKS ARE FOR EGN MODEL ONLY. (OTHER MODELS DOES NOT HAVE THESE PARTS)

LOCATION OF TR & IC

TR 1 ------- C2
TR 2 TO 8 -- D3
TR 9 TO 11 -- E3
TR 12 TO 14 - D2
TR 15 ---- D1
TR 16, 17 -- E1
TR 18 --- D1
TR 19, 20 -- C1
TR 21 TO 24 - D1
TR 25, 26 - C1
TR 27, 28 - C3
TR 29, 30 - B3
TR 31 ---- C2
TR 32 ------- A3
TR 33, 34 --- B3
TR 35, 36 --- A3
TR 37 ------ A2
TR 38 ----- A3
TR 39 TO 41 -- A2
TR 42 ----- B1
TR 43 ------ B3
TR 44 ------ A2
TR 45 ------ B2
TR 46 ------ A3
TR 47, 48 --- A1
TR 49, 50 --- D3
IC 1 ------- C3
IC 2 ---- E2
IC 3 ---- E1
IC 4 ---- D1
IC 5 ---- E2
IC 6 ---- C1
IC 7 ---- B3
IC 8 ---- B1
IC 9, 10 -- A1
IC 11 --- A2

2. Sys Con P.C Board V1004A5341 (4ED) (EGN/EA/EO)


TUNER PCB
P9
J951
BLK
J42
P42
DISPLAY PCB
P44
J44
BLK
J37
P37
POWER SUPPLY PCB
P13
J13
BLK
P43
E C B
2SA608K-NP
2SC458
E C B
2SB560
A
B
C
D
1
2
3
4
AKAI V1004A5341
RL301
IC313 LM2903P
IC312 MC1458P
IC311 MC14066BCP
IC310 TL082CP
IC314 TC4011BP
IC315 TC4011BP
IC306 TC4071BP
IC305 MC14070BCP
IC307 MB8841 - 463M
IC308 μPD5101LC
IC309 AM1408N8
IC303 MC14539BCP
IC302 MC14539BCP
IC301 MB8841 - 502J
IC304 LM2903P
X301 4MHz
BT301 P-2MII Ni-Cd 2.4V
BUZZER
CR301
CR302
CR303
4.7K x 6
J36
J25
AUDIO PCB
P25
P36
J104
SERVO PCB
J40
J51
DRIVER PCB
P51
P40
J101
VIDEO PCB
J50
J38
SENSOR PCB
P50
P38
MEMORY PCB
P15
J15
J41
P41
DRIVE PCB
P51
J51
J39
P39
RED
WHT
BLU
YLW
BLK
BRN
ORG
GRY
WHT/LONG BLK
WHT/CROSS PNK
WHT/LONG SKY

TR301, 306 ------------ 2SB560 (D,E,F)
TR302,303,307 to 310 ----- 2SA608K-NP (E,F,G)
TR304,305,311 to 313 ----- 2SC458 (C,D)

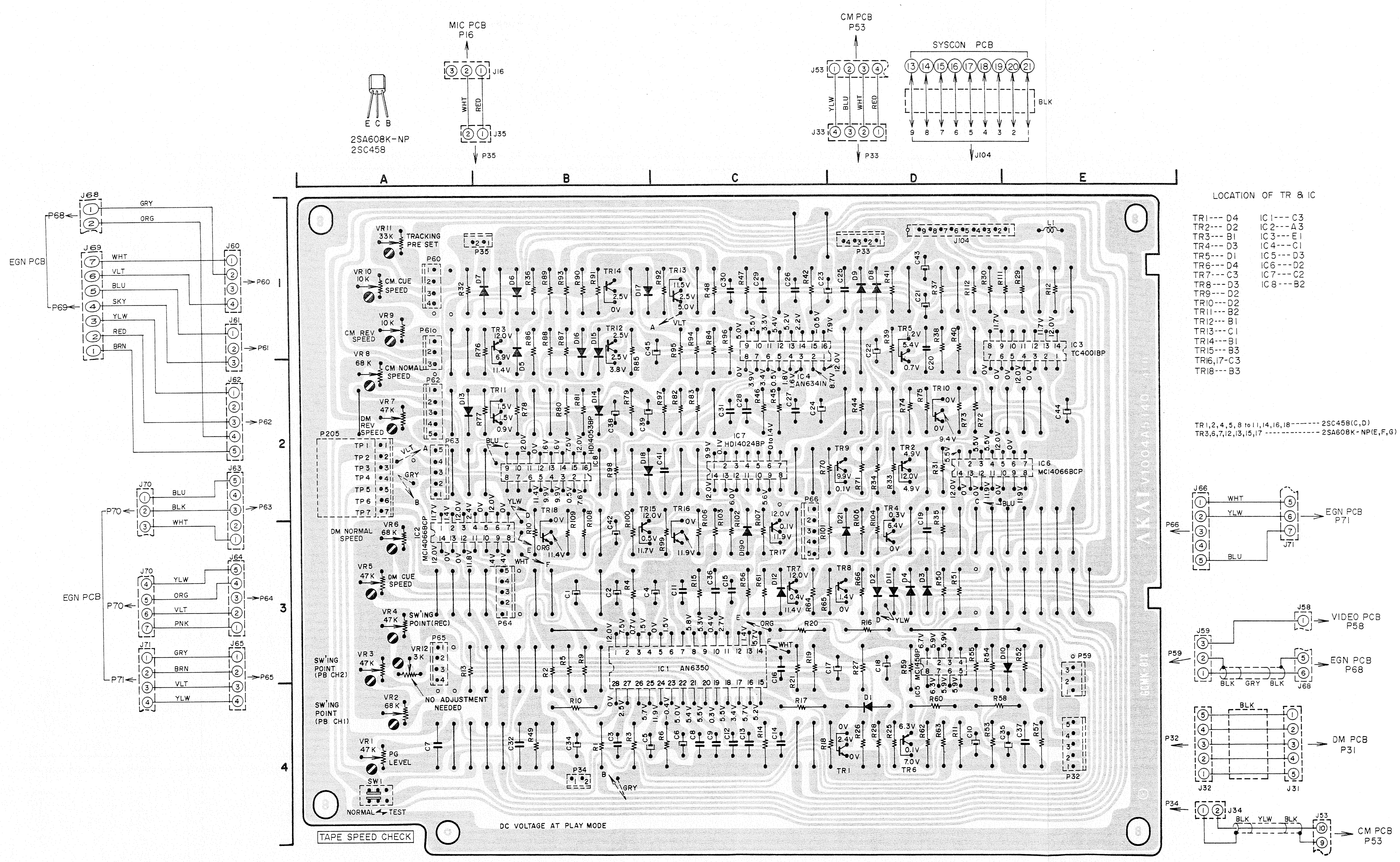
LOCATION OF TR & IC

TR301,302 --- D3
TR303 -------- D1
TR304,305 ---- B2
TR306,307 ---- D3
TR308 -------- C3
TR309 -------- B4
TR310 -------- A2
TR311 -------- A1
TR312 -------- D1
TR313 -------- C2

IC301 -------- C4
IC302,303 ---- B4
IC304 -------- A4
IC305 -------- D2
IC306 -------- C2
IC307 -------- A3
IC308 -------- B3
IC309 -------- A3
IC310 -------- A2
IC311,312 ---- B1
IC313 -------- C1
IC314 -------- C2
IC315 -------- D2

DC VOLTAGE AT PB MODE.
Ⓟ INDICATES THAT TIMING PULSE WILL BE DISPLAYED.

3. Servo P.C Board V1004A5340 (4ED) (EGN)


MIC PCB
P16
J16
WHT
RED
J35
P35
E C B
2SA608K-NP
2SC458
CM PCB
P53
J53
YLW
BLU
WHT
RED
J33
P33
SYSCON PCB
BLK
J104
A
B
C
D
E
1
2
3
4
EGN PCB
J68
P68
GRY
ORG
J69
P69
WHT
VLT
BLU
SKY
YLW
RED
BRN
J60
P60
J61
P61
J62
P62
J63
P63
J70
P70
BLK
J64
P64
PNK
J71
P71
J65
P65
VR11 33K TRACKING PRE SET
VR10 10K CM. CUE SPEED
VR9 10K CM REV SPEED
VR8 68K CM NOMAL SPEED
VR7 47K DM REV SPEED
VR6 68K DM NORMAL SPEED
VR5 47K DM CUE SPEED
VR4 47K SW'ING POINT(REC)
VR3 47K SW'ING POINT (PB CH2)
VR12 3K
NO ADJUSTMENT NEEDED
VR2 68K SW'ING POINT (PB CH1)
VR1 47K PG LEVEL
SW1
NORMAL TEST
TAPE SPEED CHECK
P205
TP1
TP2
TP3
TP4
TP5
TP6
TP7
IC1 AN6350
IC2 MC14066BCP
IC3 TC4001BP
IC4 AN6341N
IC5 MC1458P
IC6 MC14066BCP
IC7 HD14024BP
IC8 HD14053BP
DC VOLTAGE AT PLAY MODE
J66
P66
EGN PCB
P71
J58
VIDEO PCB
P58
J59
P59
EGN PCB
P68
J68
P32
J32
J31
DM PCB
P31
P34
J34
J53
CM PCB
P53

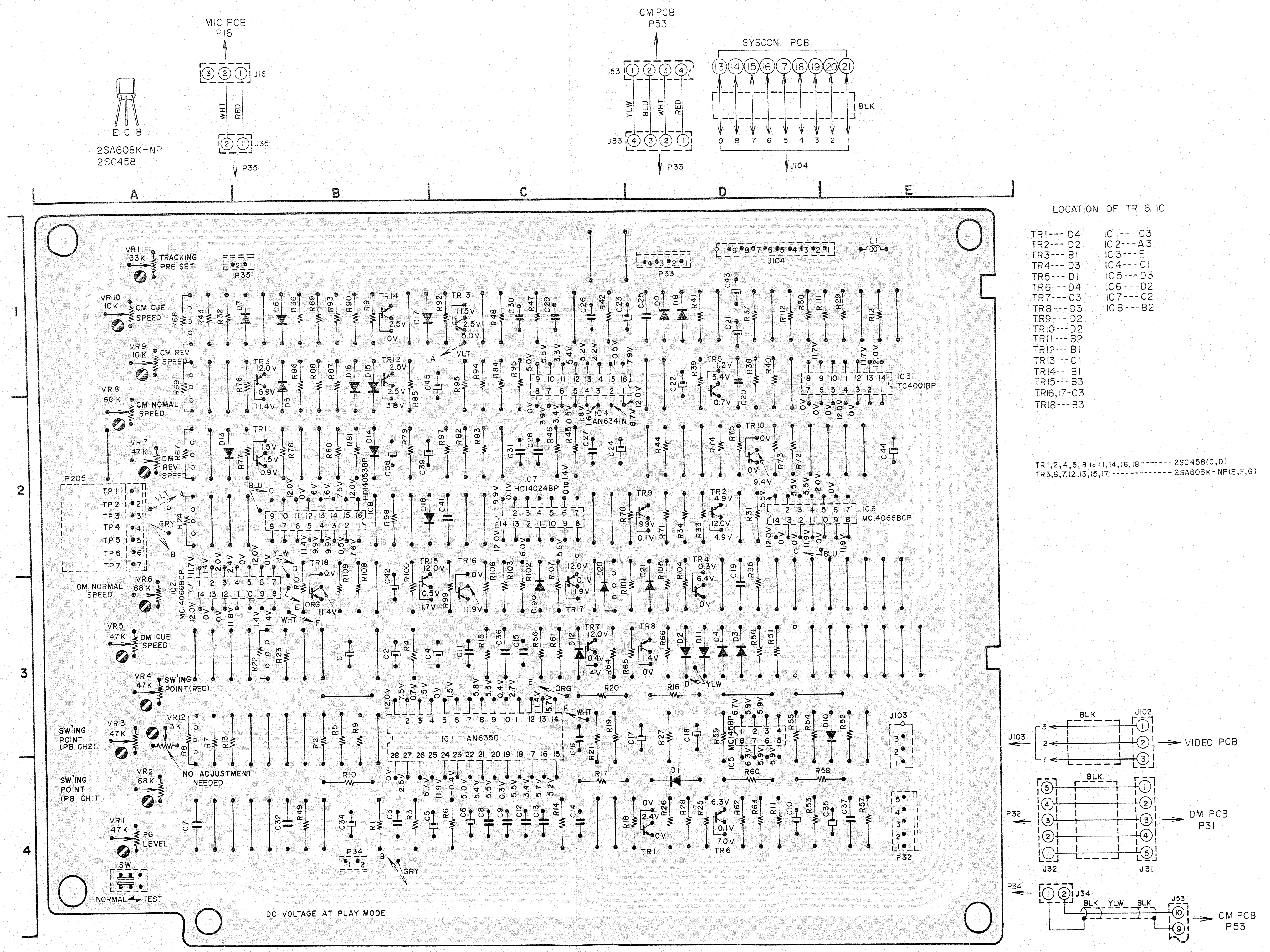
LOCATION OF TR & IC

TR1--- D4
TR2--- D2
TR3--- B1
TR4--- D3
TR5--- D1
TR6--- D4
TR7--- C3
TR8--- D3
TR9--- D2
TR10--- D2
TR11--- B2
TR12--- B1
TR13--- C1
TR14--- B1
TR15--- B3
TR16,17-C3
TR18--- B3

IC1--- C3
IC2--- A3
IC3--- E1
IC4--- C1
IC5--- D3
IC6--- D2
IC7--- C2
IC8--- B2

TR1,2,4,5,8 to 11,14,16,18 ------- 2SC458(C,D)
TR3,6,7,12,13,15,17 ------------- 2SA608K-NP(E,F,G)

4. Servo P.C Board V1004A5340 (4ED) (EA/EO)

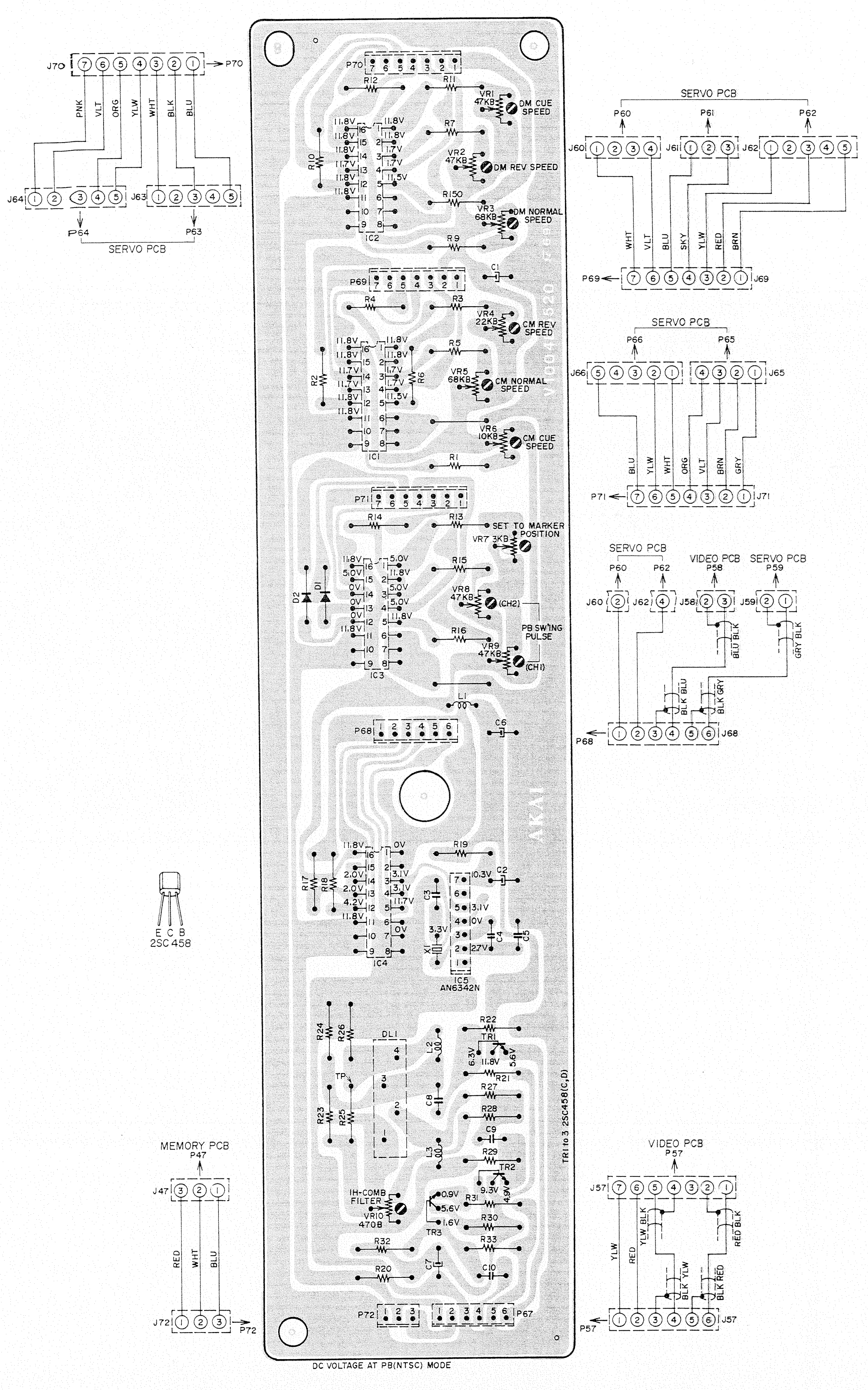

MIC PCB
P16
J16
WHT
RED
J35
P35
E C B
2SA608K-NP
2SC458
CM PCB
P53
J53
YLW
BLU
WHT
RED
J33
P33
SYSCON PCB
BLK
J104
A
B
C
D
E
1
2
3
4
VR11 33K TRACKING PRE SET
VR10 10K CM. CUE SPEED
VR9 10K CM. REV SPEED
VR8 68K CM NOMAL SPEED
VR7 47K DM REV SPEED
P205
TP1
TP2
TP3
TP4
TP5
TP6
TP7
VLT
GRY
DM NORMAL SPEED
VR6 68K
VR5 47K DM CUE SPEED
VR4 47K SW'ING POINT(REC)
SW'ING POINT (PB CH2)
VR3 47K
VR12 3K
NO ADJUSTMENT NEEDED
SW'ING POINT (PB CH1)
VR2 68K
VR1 47K PG LEVEL
SW1
NORMAL
TEST
IC1 AN6350
IC2 MC14066BCP
IC3 TC4001BP
IC4 AN6341N
IC5 MC1458P
IC6 MC14066BCP
IC7 HD14024BP
IC8 HD14053BP
P34
GRY
DC VOLTAGE AT PLAY MODE
L1
J103
J102
VIDEO PCB
P32
DM PCB
P31
J32
J31
J34
BLK
YLW
CM PCB
P53

LOCATION OF TR & IC

TR1--- D4	IC1--- C3
TR2--- D2	IC2---A3
TR3--- B1	IC3--- E1
TR4--- D3	IC4--- C1
TR5--- D1	IC5--- D3
TR6--- D4	IC6--- D2
TR7--- C3	IC7--- C2
TR8--- D3	IC8--- B2
TR9--- D2	
TR10--- D2	
TR11--- B2	
TR12--- B1	
TR13--- C1	
TR14--- B1	
TR15--- B3	
TR16,17-C3	
TR18--- B3	

TR1,2,4,5,8 to 11,14,16,18------- 2SC458(C,D)
TR3,6,7,12,13,15,17 ------------- 2SA608K-NP(E,F,G)

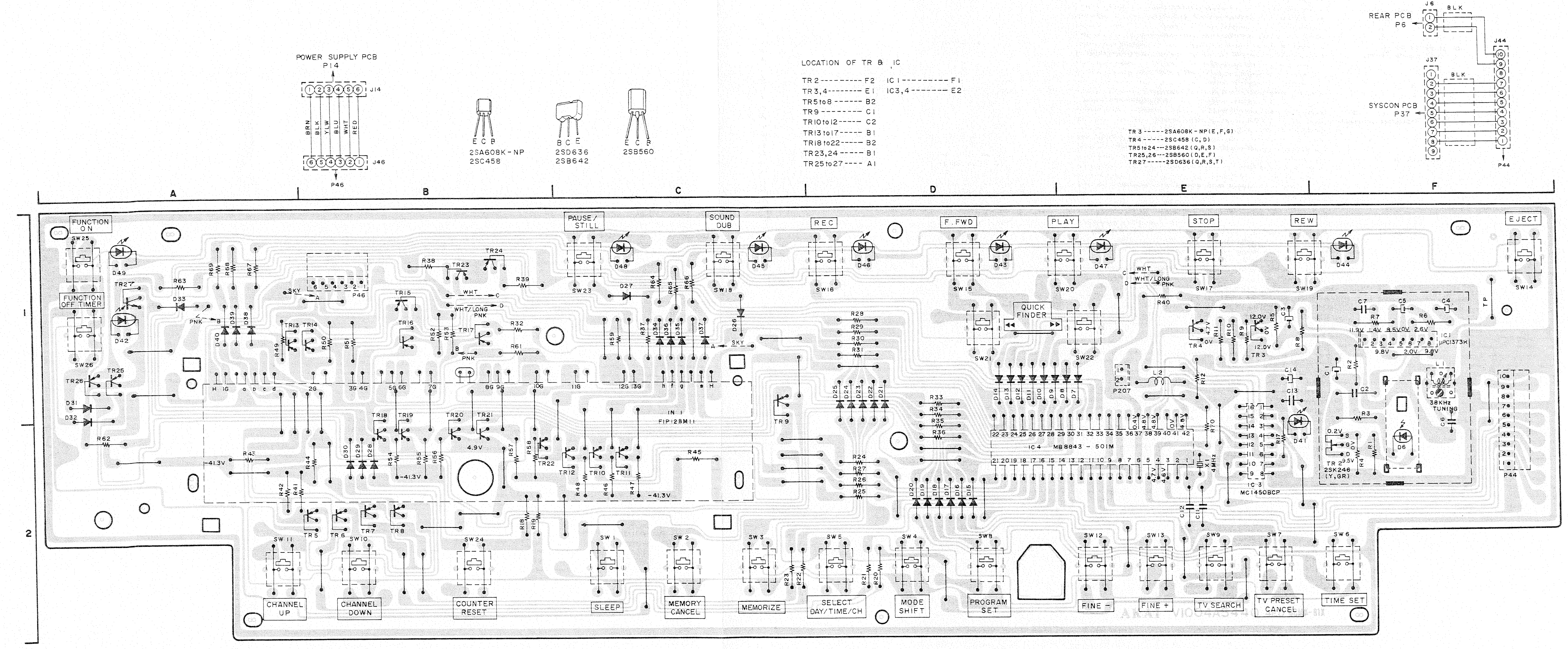
5. EGN P.C Board V1004B5520 (EGN)



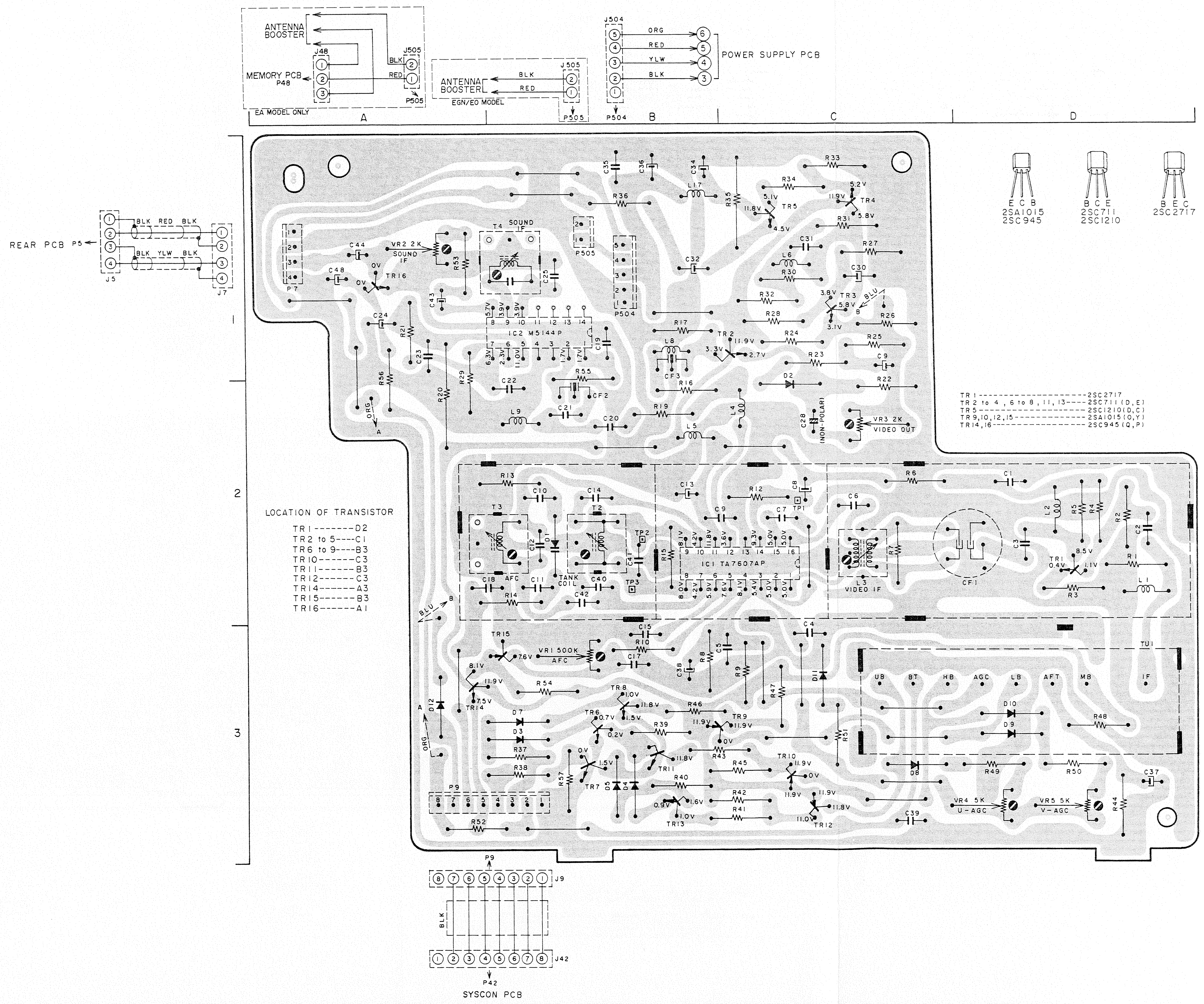
J70
P70
PNK
VLT
ORG
YLW
WHT
BLK
BLU
J64
J63
P64
P63
SERVO PCB
R12
R11
VR1 47KB
DM CUE SPEED
R7
VR2 47KB
DM REV SPEED
R10
R150
VR3 68KB
DM NORMAL SPEED
R9
IC2
P69
C1
R4
R3
VR4 22KB
CM REV SPEED
R5
R6
R2
VR5 68KB
CM NORMAL SPEED
VR6 10KB
CM CUE SPEED
R1
IC1
P71
R14
R13
SET TO MARKER POSITION
VR7 3KB
R15
VR8 47KB
(CH2)
D1
D2
R16
PB SW'ING PULSE
VR9 47KB
(CH1)
IC3
L1
P68
C6
AKAI
R19
R17
R18
C2
C3
C4
C5
X1
IC4
IC5
AN6342N
R22
TR1
R24
R26
DL1
L2
R21
R27
TP
R28
C8
R23
R25
C9
R29
L3
TR2
1H-COMB FILTER
VR10 470B
R31
R30
TR3
R32
R33
R20
C7
C10
P72
P67
TR1 to 3 2SC458(C,D)
SERVO PCB
P60
P61
P62
J60
J61
J62
WHT
VLT
BLU
SKY
YLW
RED
BRN
P69
J69
SERVO PCB
P66
P65
J66
J65
BLU
YLW
WHT
ORG
VLT
BRN
GRY
P71
J71
SERVO PCB
P60
P62
VIDEO PCB
P58
SERVO PCB
P59
J60
J62
J58
J59
BLU BLK
GRY BLK
BLK BLU
BLK GRY
P68
J68
E C B
2SC458
MEMORY PCB
P47
J47
RED
WHT
BLU
J72
P72
VIDEO PCB
P57
J57
YLW
RED
YLW BLK
RED BLK
BLK YLW
BLK RED
P57
J57

DC VOLTAGE AT PB(NTSC) MODE

6. Display P.C Board V1004A5440 (4ED) (EGN/EA/EO)


POWER SUPPLY PCB
P14
J14
BRN
BLK
YLW
BLU
WHT
RED
J46
P46
E C B
2SA608K-NP
2SC458
B C E
2SD636
2SB642
E C B
2SB560
LOCATION OF TR & IC
TR2---------F2
TR3,4--------E1
TR5to8------B2
TR9---------C1
TR10to12-----C2
TR13to17-----B1
TR18to22-----B2
TR23,24-----B1
TR25to27----A1
IC1----------F1
IC3,4--------E2
TR3-----2SA608K-NP(E,F,G)
TR4-----2SC458 (C,D)
TR5to24---2SB642 (Q,R,S)
TR25,26---2SB560 (D,E,F)
TR27-----2SD636 (Q,R,S,T)
REAR PCB
P6
J6
BLK
J44
J37
SYSCON PCB
P37
P44
A
B
C
D
E
F
1
2
FUNCTION ON
FUNCTION OFF TIMER
PAUSE/STILL
SOUND DUB
REC
F.FWD
PLAY
STOP
REW
EJECT
QUICK FINDER
CHANNEL UP
CHANNEL DOWN
COUNTER RESET
SLEEP
MEMORY CANCEL
MEMORIZE
SELECT DAY/TIME/CH
MODE SHIFT
PROGRAM SET
FINE −
FINE +
TV SEARCH
TV PRESET CANCEL
TIME SET
IN 1
FIP12BM11
IC4 MB8843-501M
IC3 MC14508CP
IC1 μPC1373H
TR2 2SK246 (Y,GR)
38KHz TUNING
-41.3V
4.9V
12.0V

7. Tuner P.C Board (EGN/EA/EO)

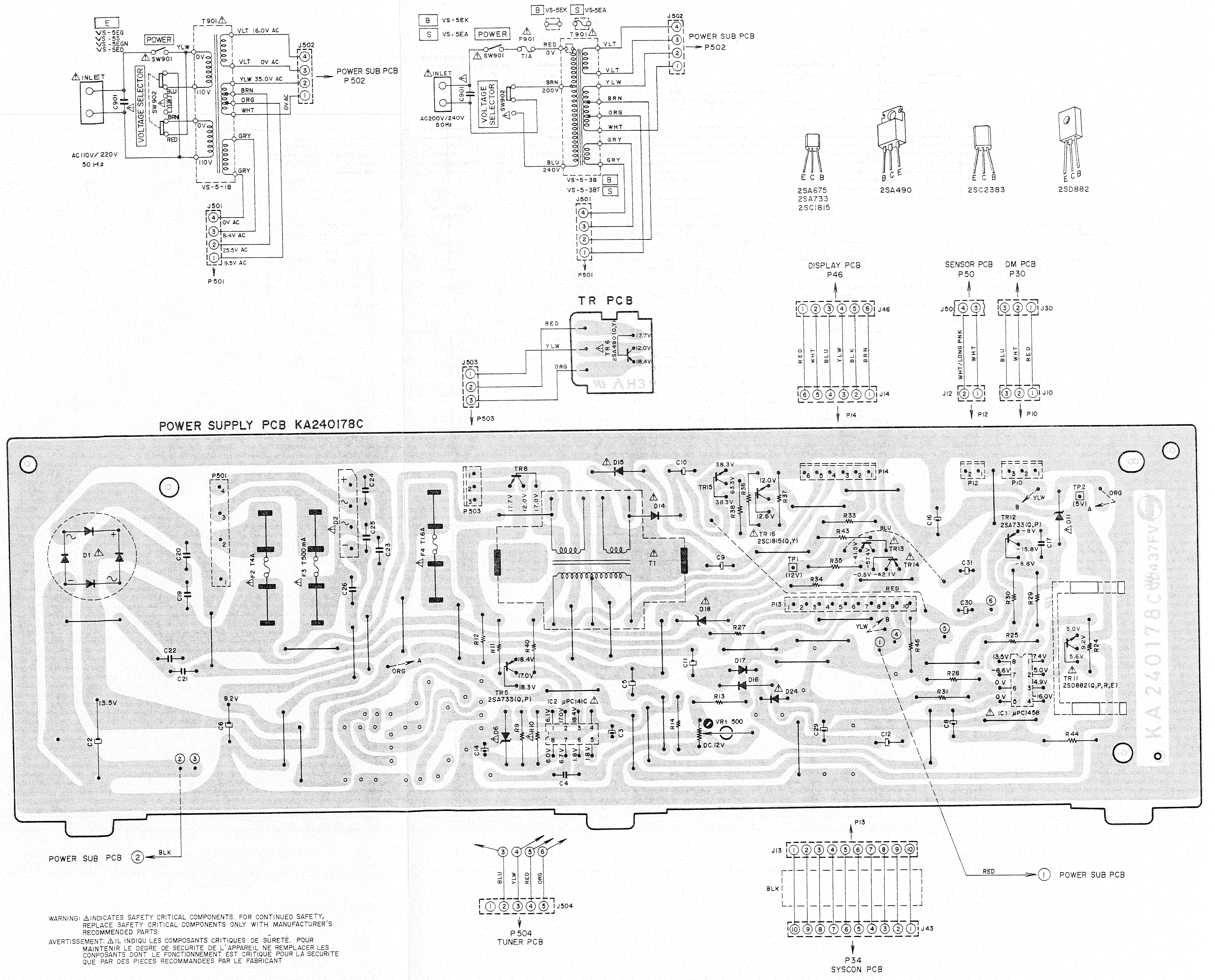

ANTENNA BOOSTER
MEMORY PCB P48
J48
J505
P505
BLK
RED
EA MODEL ONLY
ANTENNA BOOSTER
EGN/EO MODEL
J504
P504
ORG
RED
YLW
BLK
POWER SUPPLY PCB
A
B
C
D
1
2
3
REAR PCB P5
J5
J7
BLK RED BLK
BLK YLW BLK
E C B
2SA1015
2SC945
B C E
2SC711
2SC1210
B E C
2SC2717
IC2 M5144P
IC1 TA7607AP
T4 SOUND IF
VR2 2K SOUND IF
VR3 2K VIDEO OUT
VR1 500K AFC
VR4 5K U-AGC
VR5 5K V-AGC
L3 VIDEO IF
CF1
TANK COIL
TU1
UB
BT
HB
AGC
LB
AFT
MB
IF
P9
J9
J42
P42
SYSCON PCB

LOCATION OF TRANSISTOR

TR1--------D2
TR2 to 5----C1
TR6 to 9----B3
TR10-------C3
TR11-------B3
TR12-------C3
TR14-------A3
TR15-------B3
TR16-------A1

TR1------------------------2SC2717
TR2 to 4 , 6 to 8 , 11, 13-----2SC711(D,E)
TR5------------------------2SC1210(D,C)
TR9,10,12,15-------------------2SA1015(O,Y)
TR14,16---------------------2SC945(Q,P)

8. Power Supply P.C Board KA240178C and TR P.C Board (EGN/EA/EO)

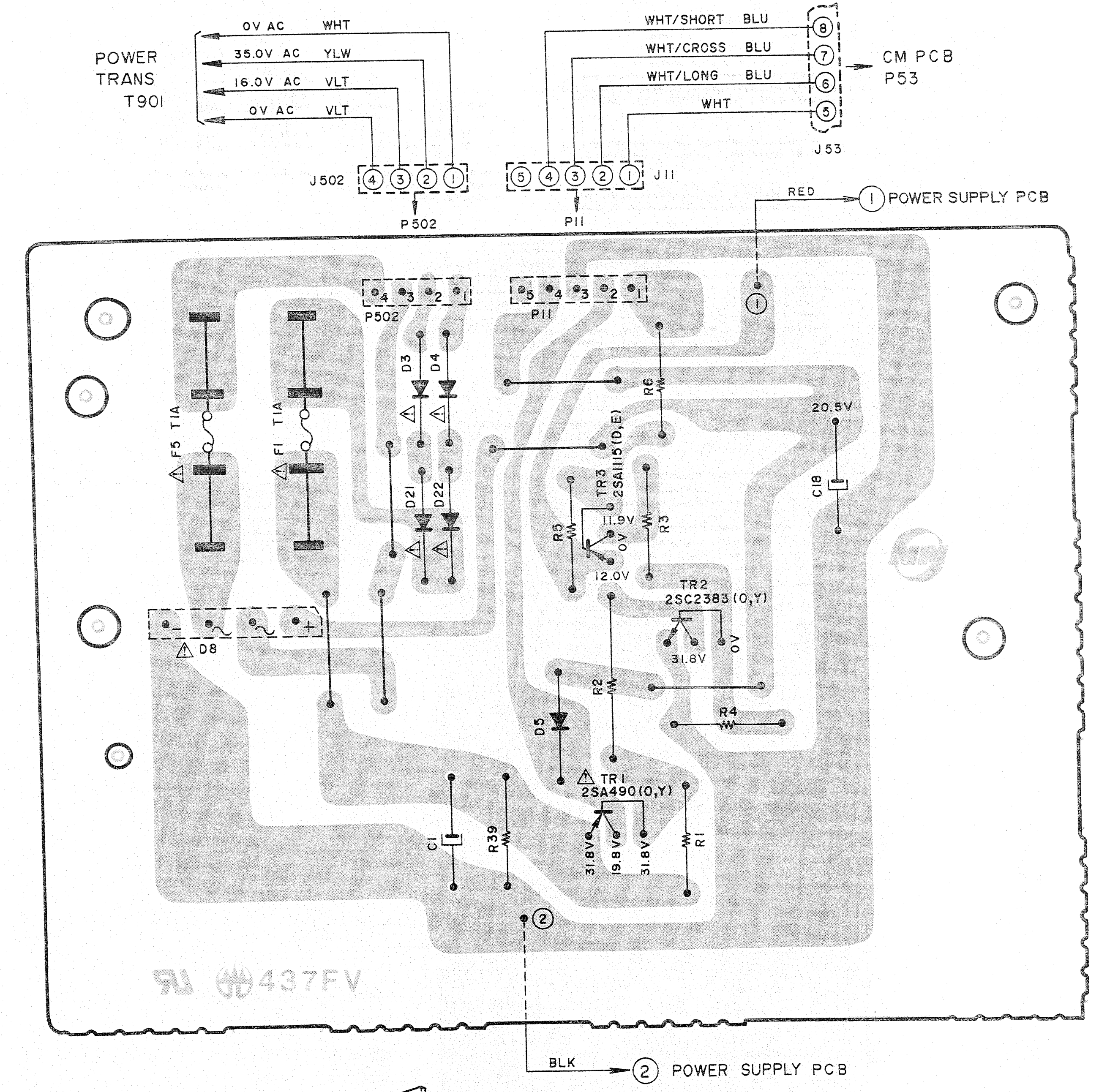


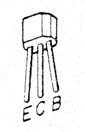
E
VS-5EG
VS-5S
VS-5EGN
VS-5EO
POWER
SW901
INLET
C901
VOLTAGE SELECTOR
SW902
AC110V/220V 50Hz
T901
VLT 16.0V AC
VLT 0V AC
YLW 35.0V AC
BRN
ORG
WHT
GRY
110V
0V
VS-5-18
J502
POWER SUB PCB P502
J501
0V AC
8.4V AC
25.5V AC
9.5V AC
P501
B VS-5EK
S VS-5EA
F901
T1A
AC200V/240V 50Hz
200V
240V
BLU
RED
VS-5-38
VS-5-38T
TR PCB
TR6 2SA490(Q,Y)
17.7V
12.0V
18.4V
J503
P503
E C B
2SA675
2SA733
2SC1815
2SA490
2SC2383
2SD882
DISPLAY PCB P46
J46
J14
P14
SENSOR PCB P50
DM PCB P30
J50
J30
J12
J10
P12
P10
POWER SUPPLY PCB KA240178C
D1
F2 T4A
F3 T500mA
F4 T1.6A
TR8
TR5 2SA733(Q,P)
IC2 μPC14IC
TR15
TR16 2SC1815(Q,Y)
TR13
TR14
TR12 2SA733(Q,P)
TR11 2SD882(Q,P,R,E)
IC1 μPC1458
VR1 500
DC 12V
TP1 (12V)
TP2 (5V)
T1
KA 240178C
POWER SUB PCB
BLK
P504 TUNER PCB
J504
P13
J13
J43
P34 SYSCON PCB

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

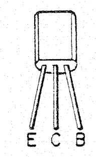
AVERTISSEMENT: ⚠IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES CONPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

9. Power Sub P.C Board (EGN/EA/EO)

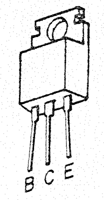

POWER
TRANS
T901
0V AC WHT
35.0V AC YLW
16.0V AC VLT
0V AC VLT
J502
P502
WHT/SHORT BLU
WHT/CROSS BLU
WHT/LONG BLU
WHT
J53
CM PCB
P53
J11
P11
RED
① POWER SUPPLY PCB
F5 T1A
F1 T1A
D3
D4
D21
D22
D8
R6
TR3
2SA1115(D,E)
11.9V
0V
12.0V
R5
R3
20.5V
C18
TR2
2SC2383(O,Y)
31.8V
0V
R2
D5
R4
TR1
2SA490(O,Y)
C1
R39
31.8V
19.8V
31.8V
R1
437FV
BLK
② POWER SUPPLY PCB



2SA1115



2SC2383

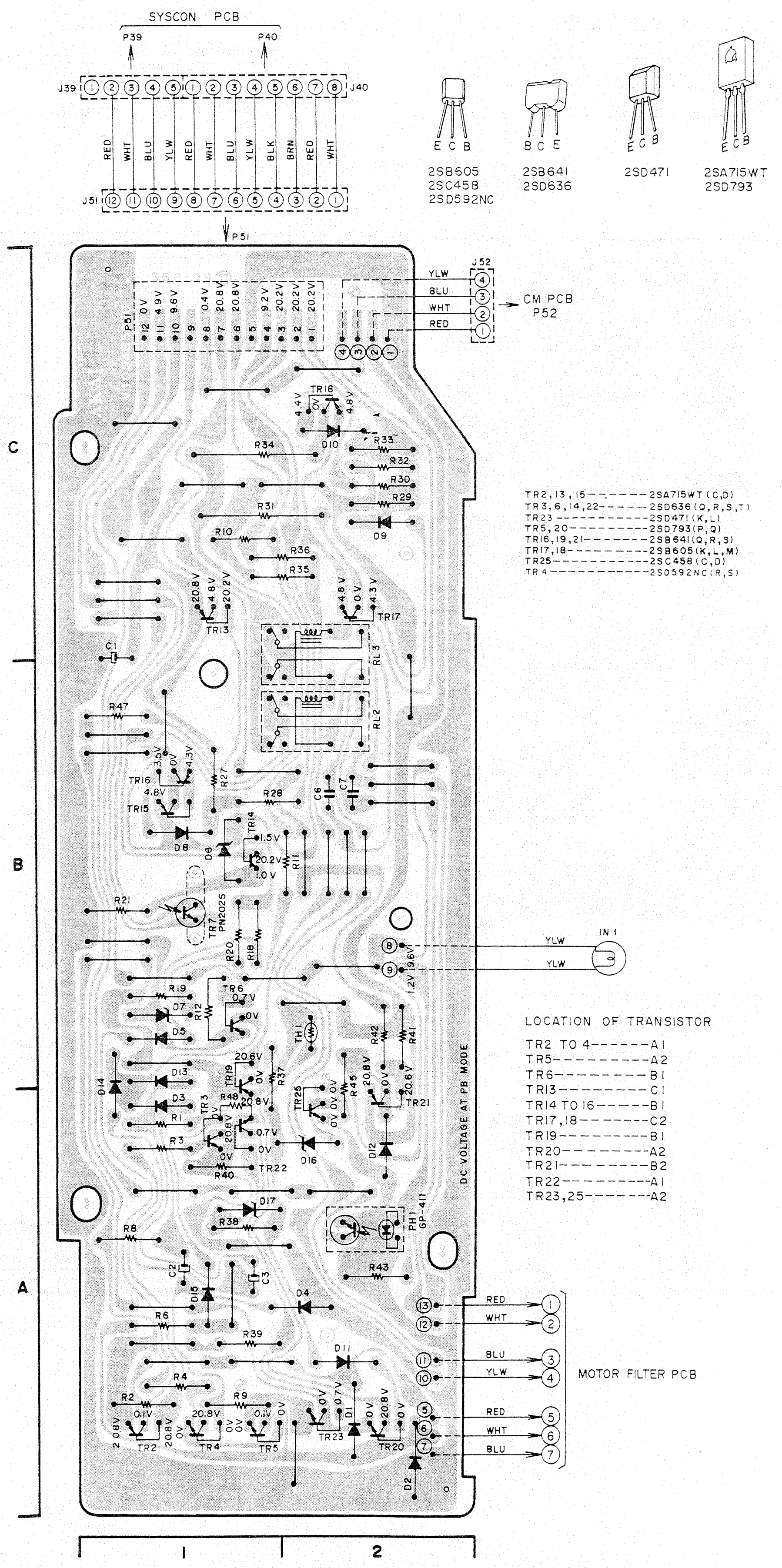


2SA490

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES CONPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

10. Drive P.C Board V1004B5360

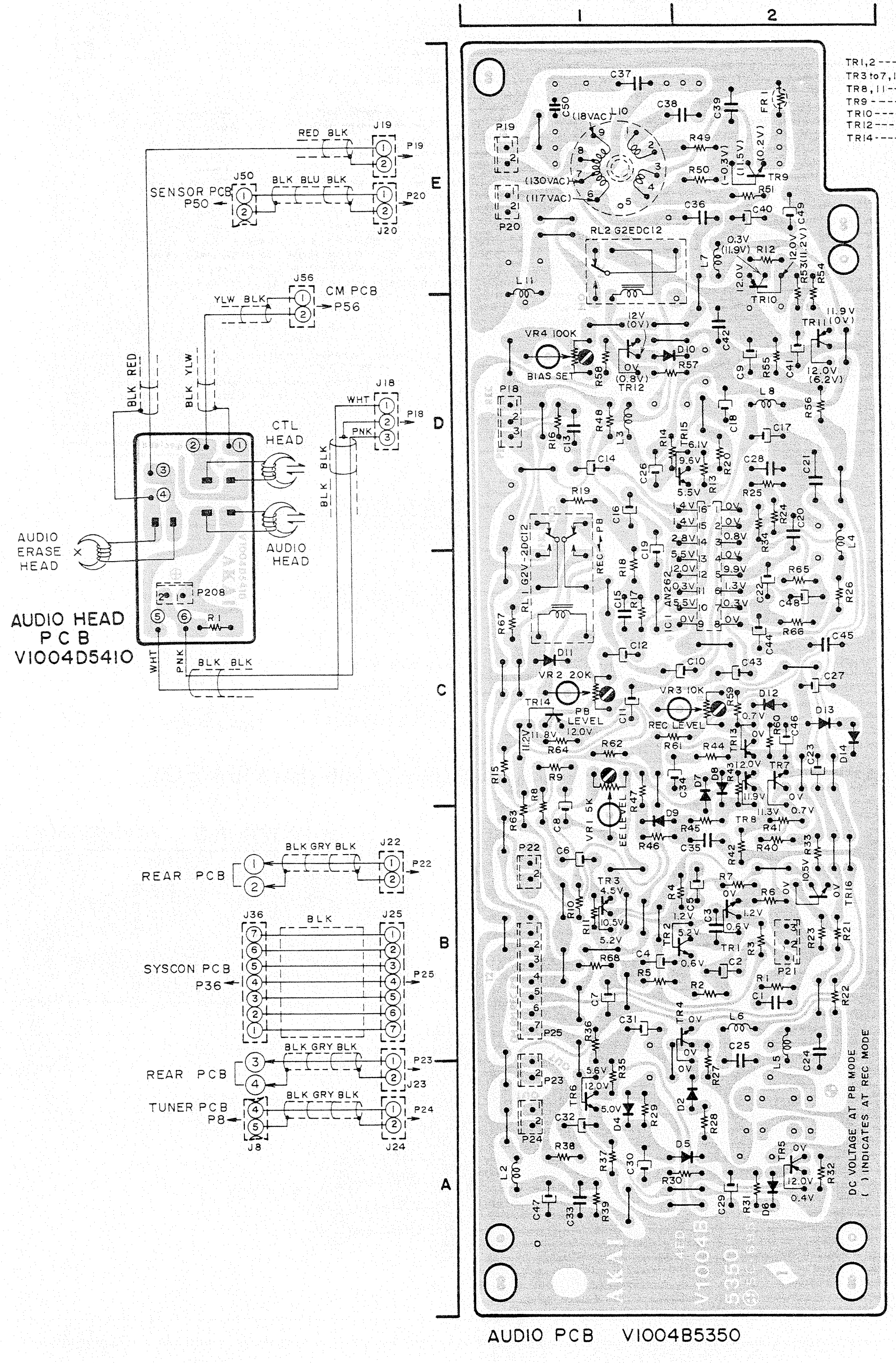

SYSCON PCB
P39
P40
J39
J40
RED
WHT
BLU
YLW
RED
WHT
BLU
YLW
BLK
BRN
RED
WHT
J51
P51
E C B
2SB605
2SC458
2SD592NC
B C E
2SB641
2SD636
E C B
2SD471
E C B
2SA715WT
2SD793
J52
YLW
BLU
WHT
RED
CM PCB
P52
12 0V
11 4.9V
10 9.6V
9
8 0.4V
7 20.8V
6 20.8V
5
4 9.2V
3 20.2V
2 20.2V
1 20.2V
TR18
4.4V
0V
4.8V
D10
R33
R32
R30
R29
D9
R34
R31
R10
R36
R35
20.8V
4.8V
20.2V
TR13
4.8V
0V
4.3V
TR17
RL3
RL2
C1
R47
3.5V
0V
4.3V
TR16
4.8V
TR15
R27
R28
C6
C7
D6
D8
TR14
1.5V
20.2V
1.0V
R11
R21
TR7
PN202S
R20
R18
IN 1
YLW
YLW
1.2V
9.6V
R19
D7
D5
R12
TR6
0.7V
0V
TH1
R42
R41
D14
D13
D3
R1
R3
TR19
20.6V
R37
R48
20.8V
TR3
0V
20.8V
0.7V
0V
R40
TR22
TR25
0V
0V
0V
0V
R45
20.8V
0V
20.6V
TR21
D16
D12
DC VOLTAGE AT PB MODE
D17
R38
PH1
GP-411
R8
C2
C3
D15
D4
R43
R6
R39
D11
R4
R2
R9
2.08V
0.1V
20.8V
TR2
20.8V
0V
TR4
0V
0.1V
0V
TR5
0V
0.7V
D1
TR23
0V
20.8V
0V
TR20
D2
RED
WHT
BLU
YLW
RED
WHT
BLU
MOTOR FILTER PCB
A
B
C
1
2

TR2, 13, 15---------2SA715WT (C,D)
TR3, 6, 14, 22--------2SD636 (Q, R, S, T)
TR23-----------------2SD471 (K, L)
TR5, 20--------------2SD793 (P, Q)
TR16, 19, 21-----------2SB641 (Q, R, S)
TR17, 18--------------2SB605 (K, L, M)
TR25-----------------2SC458 (C, D)
TR4-----------------2SD592NC (R, S)

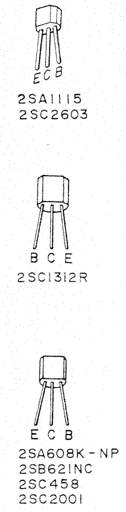
LOCATION OF TRANSISTOR

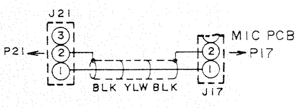
TR2 TO 4--------A1
TR5-------------A2
TR6-------------B1
TR13------------C1
TR14 TO 16-------B1
TR17, 18---------C2
TR19------------B1
TR20------------A2
TR21------------B2
TR22------------A1
TR23, 25---------A2

11. Audio P.C Board V1004B5350 (4ED) and Audio Head P.C Board V1004D5410 (EGN/EA/EO)


1
2
E
D
C
B
A
RED BLK
J19
P19
SENSOR PCB
P50
J50
BLK BLU BLK
P20
J20
J56
CM PCB
YLW BLK
P56
BLK RED
BLK YLW
J18
WHT
PNK
P18
CTL HEAD
AUDIO ERASE HEAD
AUDIO HEAD
P208
R1
AUDIO HEAD PCB V1004D5410
WHT
PNK
BLK BLK
REAR PCB
BLK GRY BLK
J22
P22
SYSCON PCB P36
J36
BLK
J25
P25
REAR PCB
BLK GRY BLK
P23
J23
TUNER PCB P8
J8
BLK GRY BLK
P24
J24
RL2 G2EDC12
VR4 100K
BIAS SET
RL1 G2V-2DC12
REC
PB
VR2 20K
PB LEVEL
VR3 10K
REC LEVEL
VR1 5K
EE LEVEL
(18VAC)
(130VAC)
(117VAC)
DC VOLTAGE AT PB MODE
( ) INDICATES AT REC MODE
AKAI
V1004B 5350
AUDIO PCB V1004B5350

TR1,2 ------------ 2SC1312R(G,H)
TR3 to 7,13,15,16 -- 2SC458(C,D)
TR8,11 ------------ 2SA608K-NP(E,F,G)
TR9 -------------- 2SC2001(K,L,M)
TR10 ------------- 2SB621NC(Q,R,S)
TR12 ------------- 2SC2603(D,E,F)
TR14 ------------- 2SA1115(D,E,F)

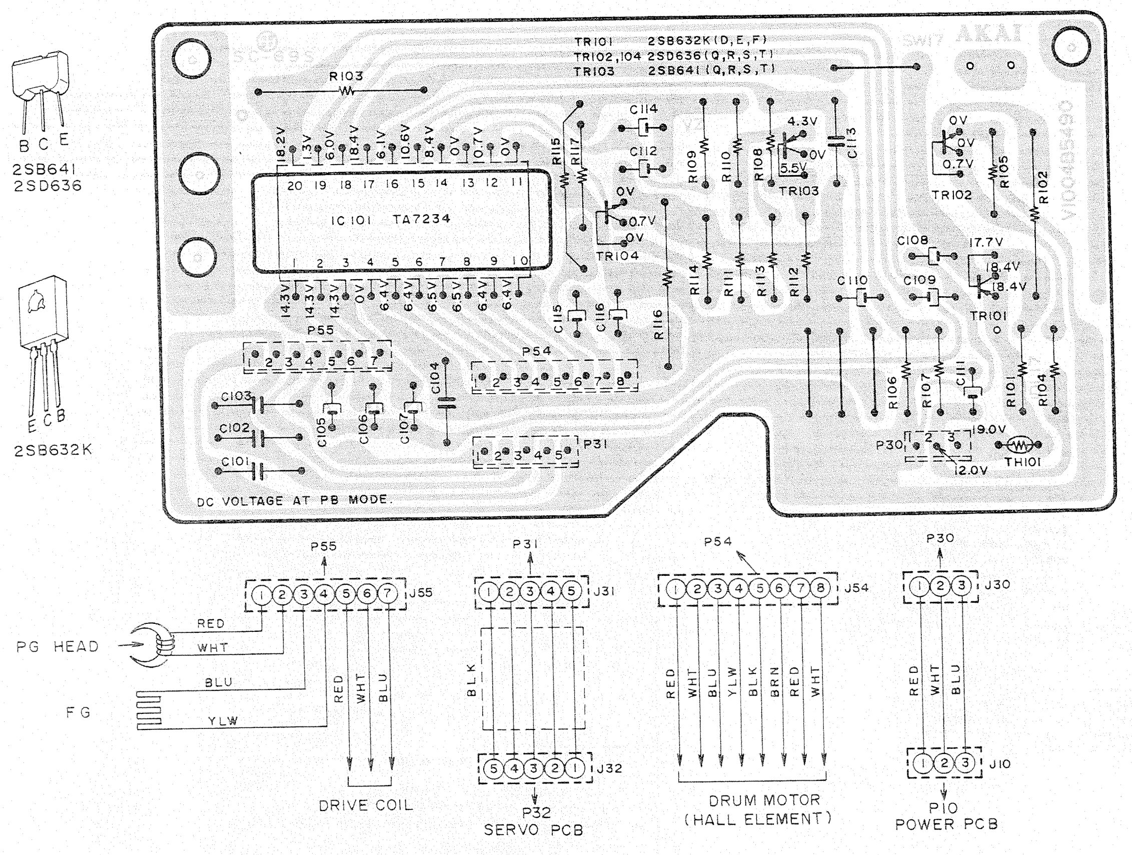

E C B
2SA1115
2SC2603
B C E
2SC1312R
E C B
2SA608K-NP
2SB621NC
2SC458
2SC2001


J21
P21
MIC PCB
P17
BLK YLW BLK
J17

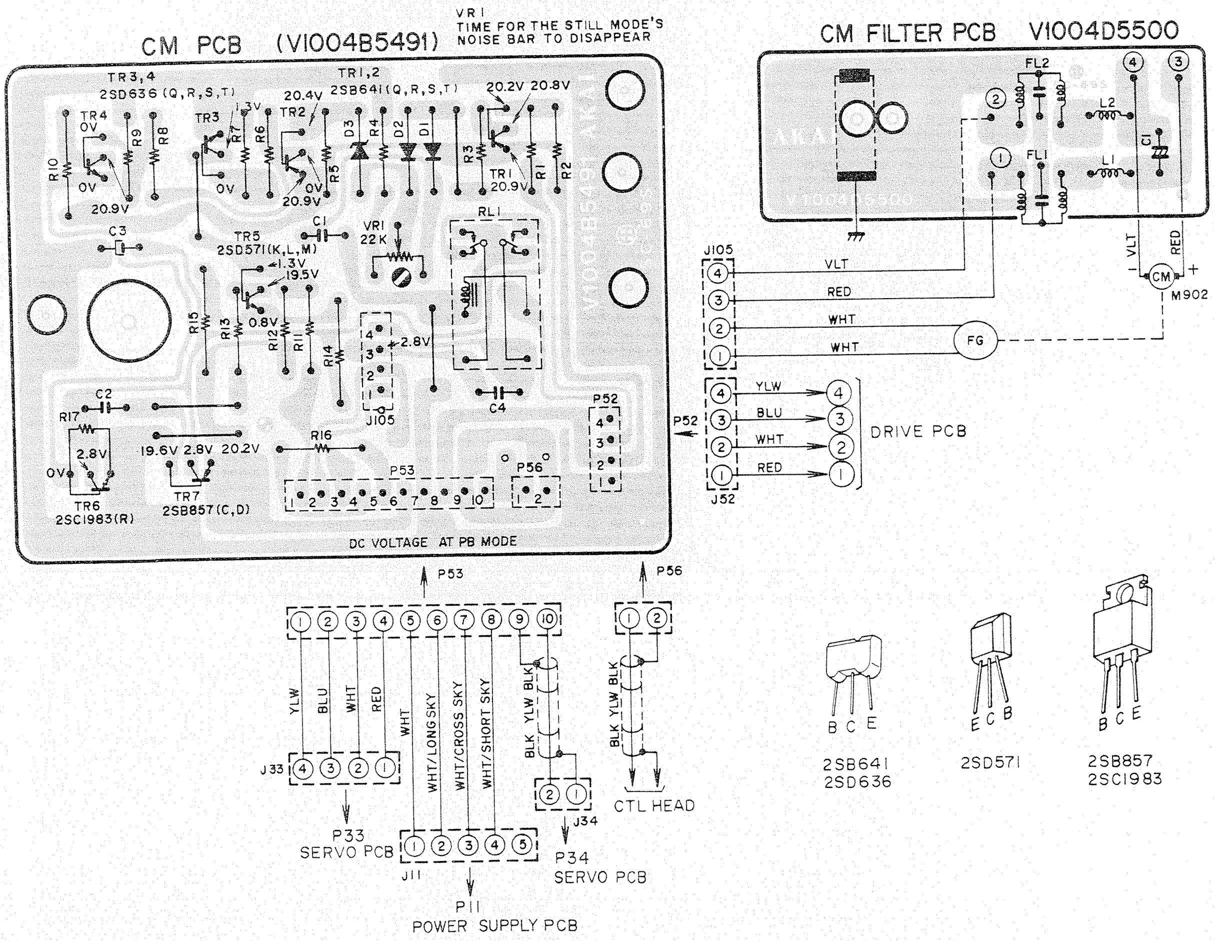
LOCATION OF TRANSISTOR

TR1,2 -------- B2
TR3 -------- B1
TR4 -------- B2
TR5 -------- A2
TR6 -------- A1
TR7,8 ------- C2
TR9,10 ------ E2
TR11 -------- D2
TR12 -------- D1
TR13 -------- C2
TR14 -------- C1
TR15 -------- D2
TR16 -------- B2

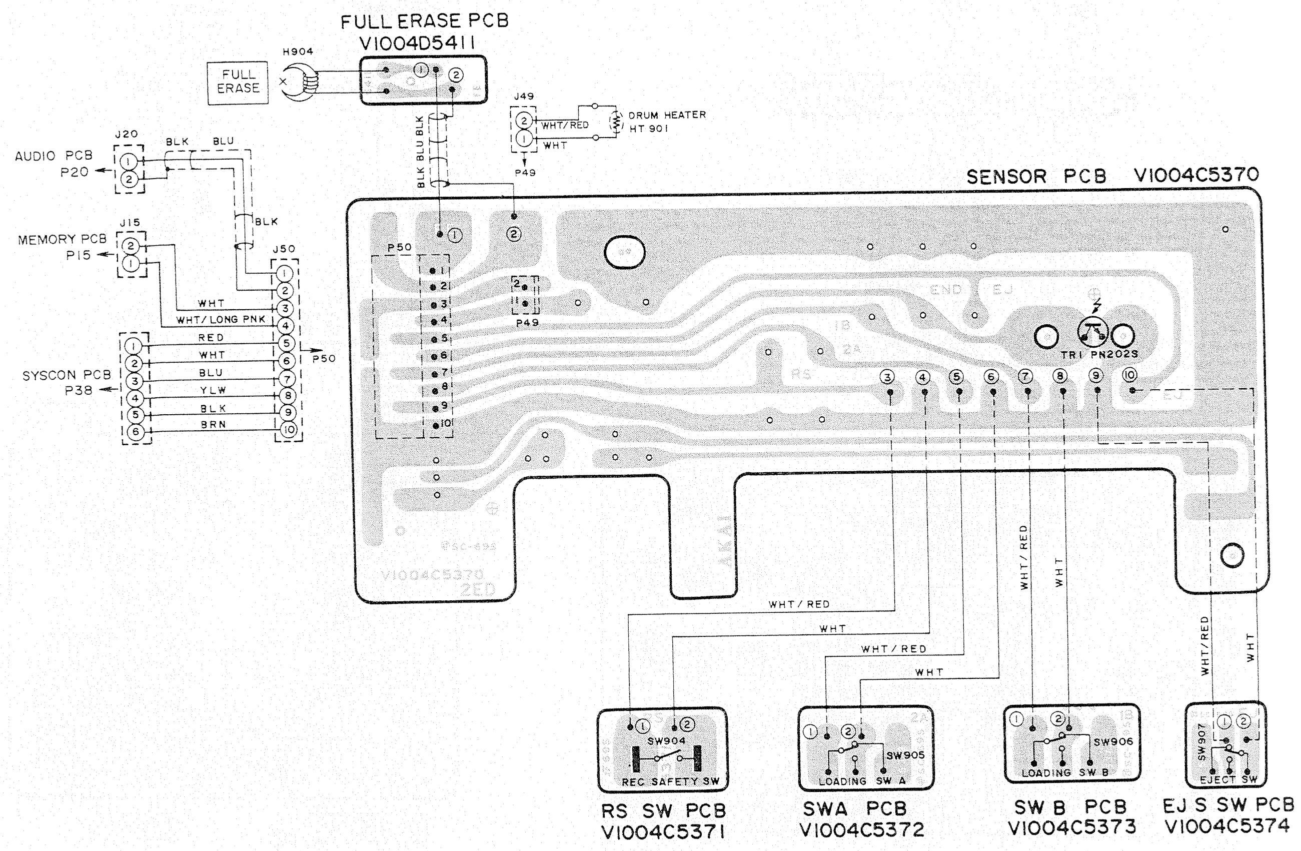
12. Drum Motor P.C Board V1004B5490 (EGN/EA/EO)


B C E
2SB641
2SD636
E C B
2SB632K
TR101 2SB632K(D,E,F)
TR102,104 2SD636(Q,R,S,T)
TR103 2SB641(Q,R,S,T)
AKAI
V1004B5490
IC101 TA7234
R103
R115
R117
R109
R110
R108
R105
R102
R116
R114
R111
R113
R112
R106
R107
R101
R104
C114
C112
C113
C108
C109
C110
C115
C116
C111
C103
C102
C101
C104
C105
C106
C107
TR101
TR102
TR103
TR104
TH101
P55
P54
P31
P30
DC VOLTAGE AT PB MODE.
J55
J31
J54
J30
J32
J10
PG HEAD
FG
RED
WHT
BLU
YLW
BLK
BRN
DRIVE COIL
P32
SERVO PCB
DRUM MOTOR
(HALL ELEMENT)
P10
POWER PCB

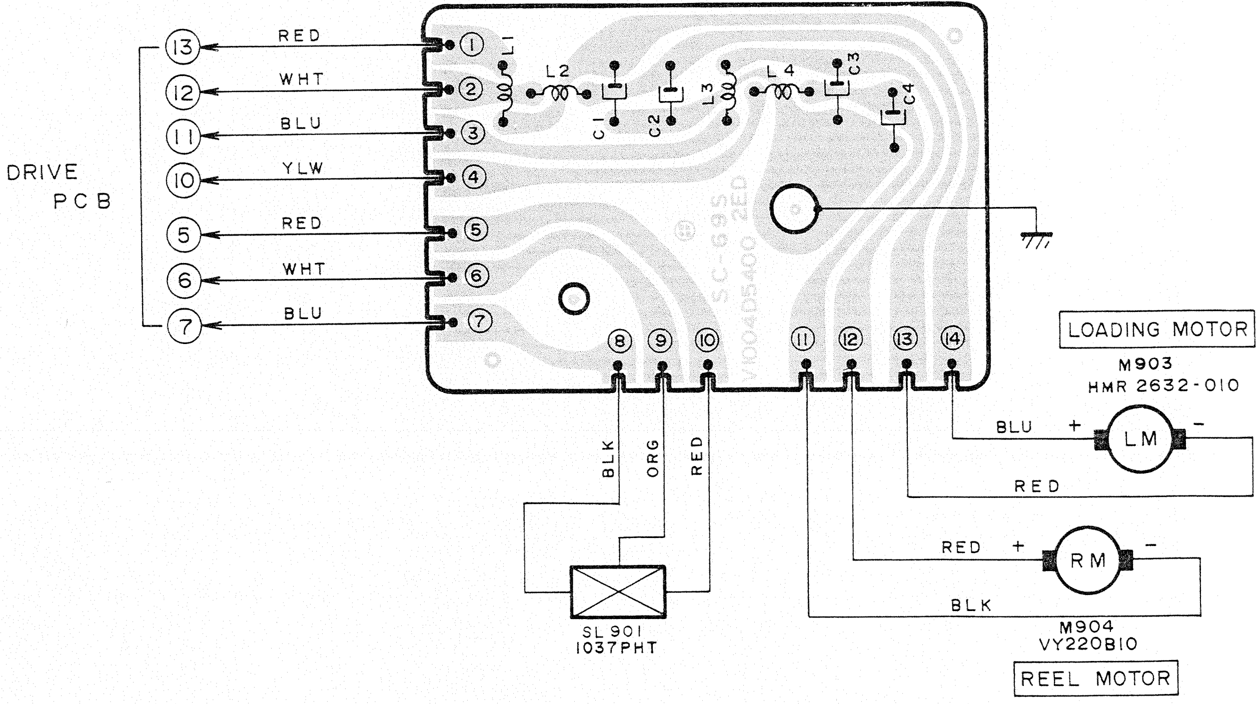
13. CM P.C Board V1004B5491 and CM Filter P.C Board V1004D5500 (EGN/EA/EO)


CM PCB (V1004B5491)
VR1
TIME FOR THE STILL MODE'S
NOISE BAR TO DISAPPEAR
CM FILTER PCB V1004D5500
TR3,4
2SD636(Q,R,S,T)
TR1,2
2SB641(Q,R,S,T)
TR5
2SD571(K,L,M)
TR6
2SC1983(R)
TR7
2SB857(C,D)
RL1
VR1 22K
DC VOLTAGE AT PB MODE
AKAI
V1004B5491
FL1
FL2
L1
L2
C1
J105
J52
P52
P53
P56
VLT
RED
WHT
YLW
BLU
CM
M902
FG
DRIVE PCB
J33
J34
J11
P33
SERVO PCB
P34
SERVO PCB
P11
POWER SUPPLY PCB
CTL HEAD
WHT/LONG SKY
WHT/CROSS SKY
WHT/SHORT SKY
BLK YLW BLK
B C E
2SB641
2SD636
E C B
2SD571
B C E
2SB857
2SC1983

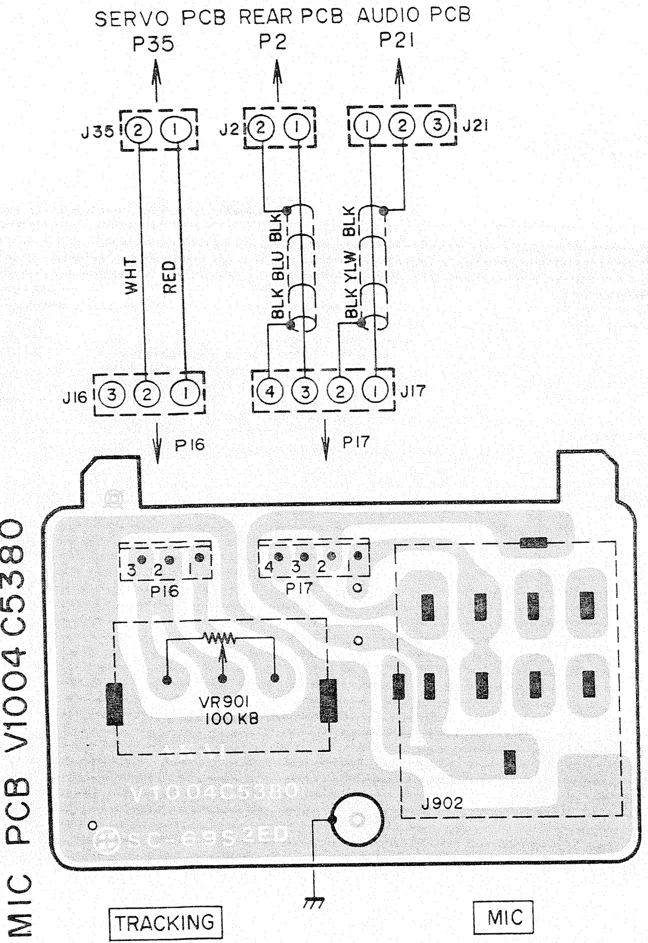
14. Sensor P.C Board V1004C5370 (2ED), Full Erase P.C Board V1004D5411, RS. SW P.C Board V1004C5371, SW A P.C Board V1004C5372, SW B P.C Board V1004C5373 and EJ. S SW P.C Board V1004C5374 (EGN/EA/EO)


FULL ERASE PCB
V1004D5411
H904
FULL ERASE
J49
WHT/RED
WHT
DRUM HEATER
HT 901
P49
J20
BLK
BLU
AUDIO PCB
P20
BLK BLU BLK
BLK
J15
MEMORY PCB
P15
J50
WHT
WHT/LONG PNK
RED
WHT
BLU
YLW
BLK
BRN
SYSCON PCB
P38
P50
SENSOR PCB V1004C5370
END
EJ
1B
2A
RS
TR1 PN202S
V1004C5370
2ED
AKAI
WHT/RED
WHT
WHT/RED
WHT
WHT/RED
WHT
WHT/RED
WHT
SW904
REC SAFETY SW
SW905
LOADING SW A
SW906
LOADING SW B
SW907
EJECT SW
RS SW PCB
V1004C5371
SWA PCB
V1004C5372
SW B PCB
V1004C5373
EJ S SW PCB
V1004C5374

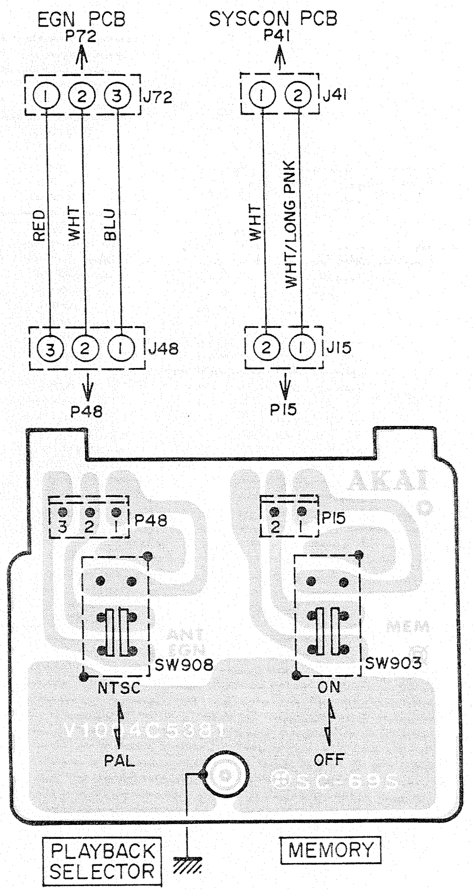
15. Motor Filter P.C Board V1004D5400 (2ED) (EGN/EA/EO)


DRIVE
PCB
RED
WHT
BLU
YLW
RED
WHT
BLU
L1
L2
L3
L4
C1
C2
C3
C4
SC-695
V1004D5400 2ED
BLK
ORG
RED
SL 901
1037PHT
LOADING MOTOR
M903
HMR 2632-010
BLU
+
LM
-
RED
RED
+
RM
-
BLK
M904
VY220B10
REEL MOTOR

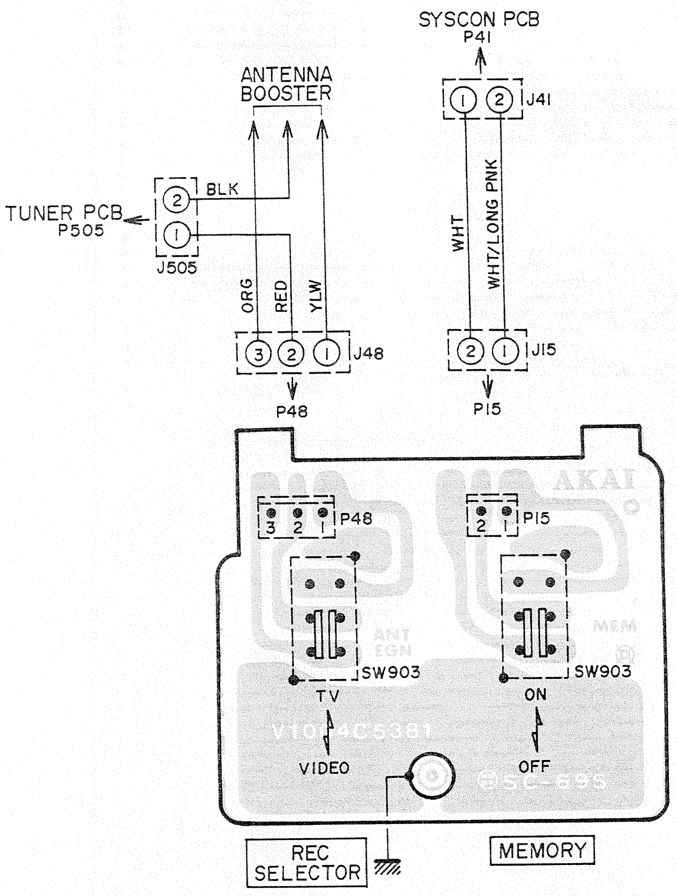
16. Mic P.C Board V1004C5380 (2ED)


SERVO PCB
P35
REAR PCB
P2
AUDIO PCB
P21
J35
J2
J21
WHT
RED
BLK BLU BLK
BLK YLW BLK
J16
J17
P16
P17
VR901
100 KB
V1004C5380
SC-69S2ED
J902
MIC PCB V1004C5380
TRACKING
MIC

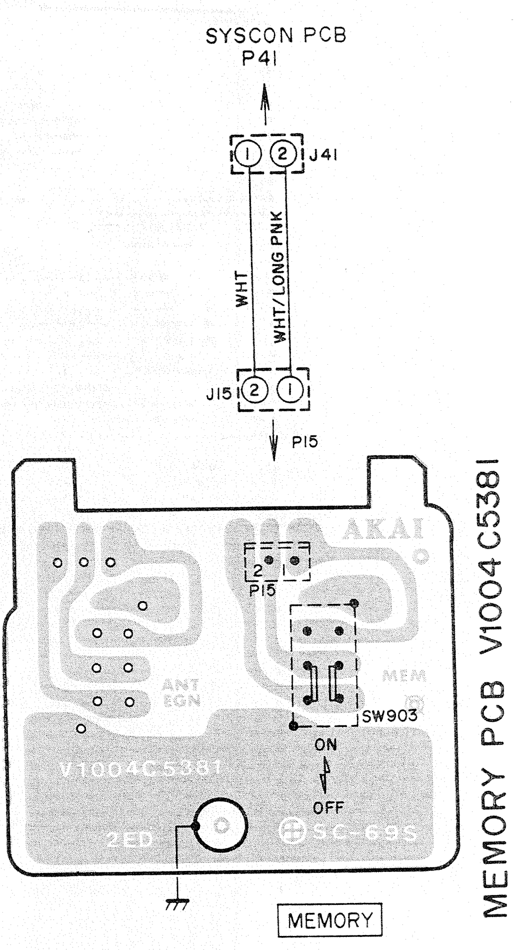
17. Memory P.C Board V1004C5381 (EGN)


EGN PCB
P72
SYSCON PCB
P41
J72
J41
RED
WHT
BLU
WHT
WHT/LONG PNK
J48
J15
P48
P15
AKAI
SW908
SW903
NTSC
PAL
ON
OFF
V1004C5381
SC-69S
PLAYBACK SELECTOR
MEMORY

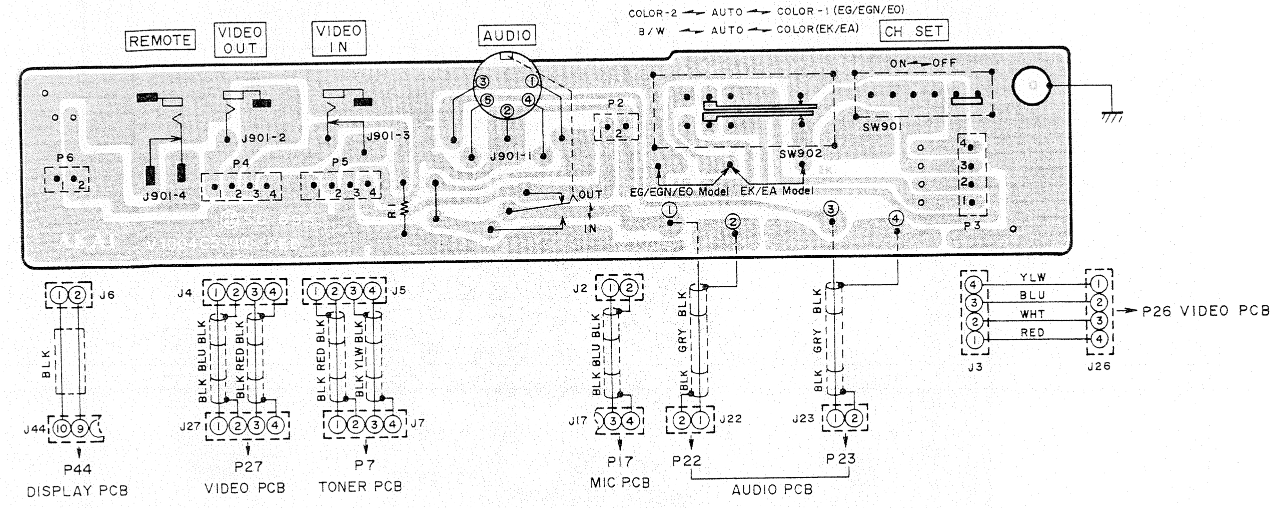
18. Memory P.C Board V1004C5381 (EA)


SYSCON PCB
P41
ANTENNA
BOOSTER
J41
BLK
TUNER PCB
P505
J505
ORG
RED
YLW
WHT
WHT/LONG PNK
J48
J15
P48
P15
AKAI
P48
P15
ANT
EGN
MEM
SW903
SW903
TV
VIDEO
ON
OFF
V1004C5381
SC-69S
REC
SELECTOR
MEMORY

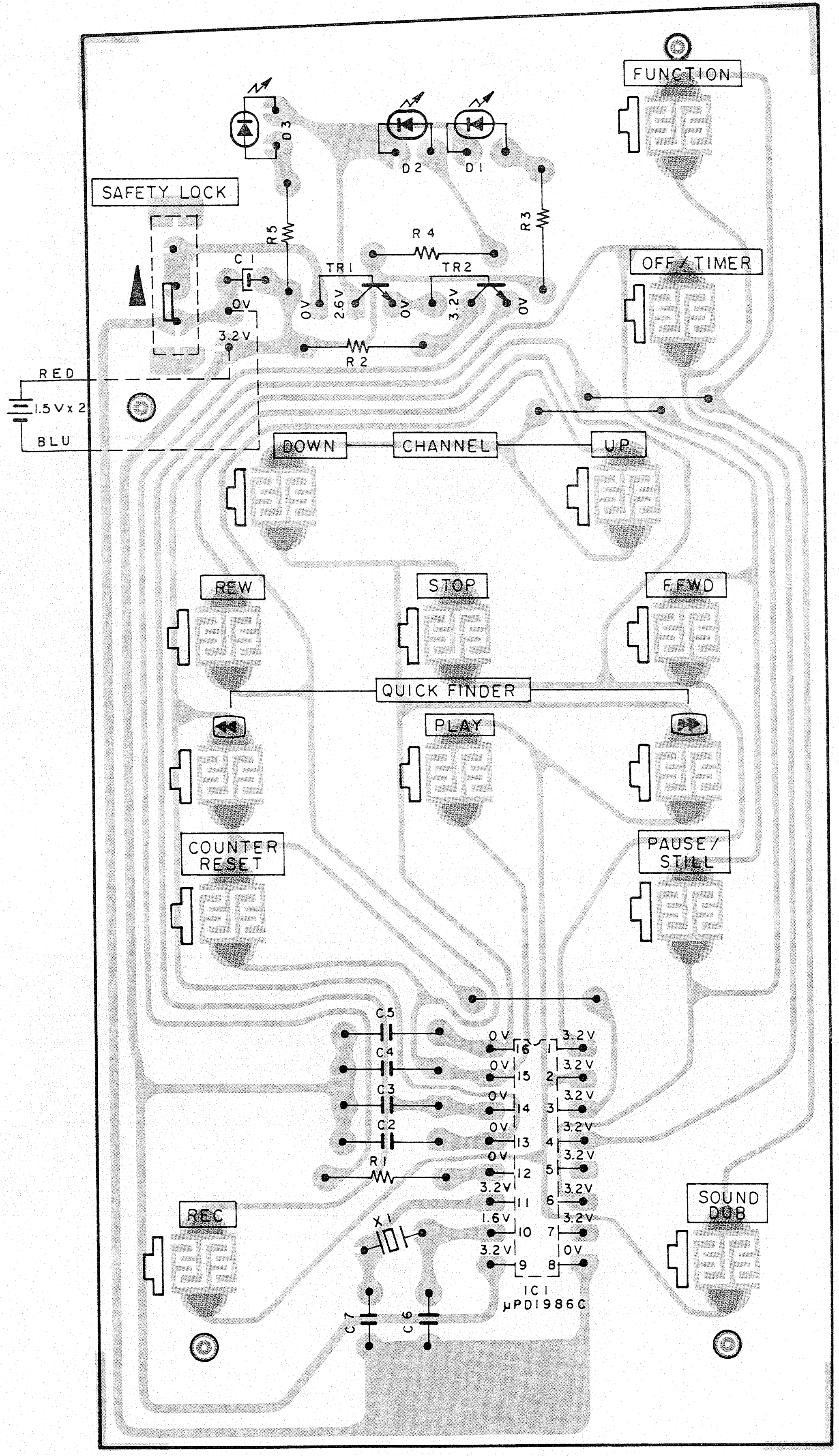
19. Memory P.C Board V1004C5381 (EO)


SYSCON PCB
P41
J41
WHT
WHT/LONG PNK
J15
P15
AKAI
P15
ANT
EGN
MEM
SW903
ON
OFF
V1004C5381
2ED
SC-69S
MEMORY
MEMORY PCB V1004C5381

20. Rear P.C Board V1004C5390 (3ED) (EGN/EA/EO)


COLOR-2 AUTO COLOR-1 (EG/EGN/EO)
B/W AUTO COLOR(EK/EA)
REMOTE
VIDEO OUT
VIDEO IN
AUDIO
CH SET
ON OFF
P2
SW901
J901-2
J901-3
J901-1
SW902
P6
P4
P5
J901-4
R1
OUT
IN
EG/EGN/EO Model
EK/EA Model
P3
AKAI
V1004C5390 3ED
SC-69S
J6
J4
J5
J2
BLK
BLK BLU BLK
BLK RED BLK
BLK RED BLK
BLK YLW BLK
BLK BLU BLK
GRY BLK
BLK
GRY BLK
BLK
YLW
BLU
WHT
RED
J3
J26
P26 VIDEO PCB
J44
J27
J7
J17
J22
J23
P44
DISPLAY PCB
P27
VIDEO PCB
P7
TONER PCB
P17
MIC PCB
P22
P23
AUDIO PCB

21. Remoto Control Unit P.C Board (EGN/EA/EO)


FUNCTION
D3
D2
D1
SAFETY LOCK
R5
R4
R3
C1
TR1
TR2
0V
2.6V
0V
3.2V
0V
0V
3.2V
R2
OFF/TIMER
RED
1.5V x 2
BLU
DOWN
CHANNEL
UP
REW
STOP
F.FWD
QUICK FINDER
PLAY
COUNTER RESET
PAUSE/STILL
C5
C4
C3
C2
R1
0V
16
0V
15
0V
14
0V
13
0V
12
3.2V
11
1.6V
10
3.2V
9
1
3.2V
2
3.2V
3
3.2V
4
3.2V
5
3.2V
6
3.2V
7
3.2V
8
0V
X1
IC1
µPD1986C
C7
C6
REC
SOUND DUB

—MEMO—

—MEMO—

SECTION 2

PARTS LIST

TABLE OF CONTENTS

1. VIDEO (PAL) P.C BOARD BLOCK 31
2. SERVO P.C BOARD BLOCK 31
3. TUNER P.C BOARD BLOCK 31
4. MEMORY P.C BOARD BLOCK 31
5. POWER & RF BLOCK 31
6. EGN P.C BOARD BLOCK 31
7. FRONT PANEL BLOCK 31
8. FINAL ASSEMBLY BLOCK 31

Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

27-28 leer

HOW TO USE THIS PARTS LIST

1. This parts list is compiled by various individual blocks based on assembly process.
2. When ordering parts, please describe parts number, serial number, and model number in detail.
3. How to read list.

The reference number corresponds with illustration or photo number of that particular parts list.

This number corresponds with the Figure Number.

This number corresponds with the individual parts' index number in that figure.

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

12-115x

Ref. No.	Parts No.	Description
		FLYWHEEL BLOCK #13
12-115x	800425	Flywheel Block Assy. Comp.
12-116	244506	Flywheel Only
12-117x	244754	Felt, Flywheel
12-118	251324	Main Metal Case
12-119	253080	Main Metal

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of components of the Schematic Diagram or Service Manual.
5. The indications of Resistors and Capacitors in the photos of P.C. Board are being eliminated.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
7. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.

   It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).
8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

CAUTION:

1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Service Manual (Basic Parts List) may be partially changed, please use this parts list for all future reference.

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMEMNDED PARTS.

AVERTISSEMENT: ⚠ IL INDIQU LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

The composite parts of Model VS-5 EGN/EA/EO, except for those which have been changed as per the list below, are identical to those of Model VS-5 EG/EK. Therefore, when ordering parts for this VTR, please utilize Model VS-5 EG/EK service manual.

1. VIDEO (PAL) P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
1-1	BAV1004A460A	PC VIDEO (PAL) BLK VS-5EG(EA/EO)
1-2	BAV1004A460C	PC VIDEO (PAL) BLK VS-5EGN

2. SERVO P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1	BAV1004A450B	PC SERVO BLK VS-5EGN

3. TUNER P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
3-1	BA705537	PC TUNER BLK VS-5EA
3-2	BA705540	PC TUNER BLK VS-5EO
3-3	BA705538	PC TUNER BLK VS-5EG (EGN)
3-4	EE330157	TV TUNER VS-5EA
3-5	EE330158	TV TUNER VS-5EO
3-6	EE330292	TV TUNER CDE1-011 (EGN)
3-CF101	ER705495	FILTER CE F1024 38.9MHz (EO)
3-CF101	ER705498	FILTER CE F1023W 36.875MHz (EA)
3-CF102	ER705499	FILTER CE SFE 5.5MHz (EA/EO)
3-CF103	ER705501	FILTER CE TPS 5.5MHz (EA/EO)
3-7	EW705503	COAXIAL CABLE 1.5C 2V . KD243665 (EO)

4. MEMORY P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
4-SW908	ES328771	SW PUSH SPJ222N 2-02-02N (EGN)
4-SW909	ES328771	SW PUSH SPJ222N 2-02-02N (EA)

5. POWER & RF BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
5-1	BV330109	RF CONVERTER MDK3-253 (EGN)
5-2	BV330159	RF CONVERTER VS-5EA
5-3	BV330109	RF CONVERTER MDK3-253
5-4	BV332107	ANT BOOSTER YBC1-003 (EO)
5-5	ES330414	SW ANT YBC1-012 (EA)
5-6	BT705526	⚠ TRANS POWER VS-5-1B (EO/EGN)
5-7	BT705528	⚠ TRANS POWER VS-5-3BT (EA)

6. EGN P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BAV1007A010A	PC EGN BLK VS-5EGN
6-IC1 to 4	EI328593	IC HD14053BP
6-IC5	EI324203	IC AN6342N
6-TR1to3	ET309334	TR 2SC458 C,D
6-D1,2	ED200469	D SILICON H DS448 FA5 F10
6-VR1,2	EV323881	R S-FIX V CR29R 3P 0.50W 473
6-VR3	EV323880	R S-FIX V CR29R 3P 0.50W 683
6-VR4	EV325994	R S-FIX V H1052A 3P 0.15W 103
6-VR5	EV330258	R S-FIX V H1052A 3P 0.15W 683
6-VR6	EV325994	R S-FIX V H1052A 3P 0.15W 103
6-VR7	EV200466	R S-FIX H EVN38 3P 302
6-VR8,9	EV323881	R S-FIX V CR29R 3P 0.50W 473
6-VR10	EV330611	R S-FIX V H1052A 3P 0.15W 471
6-L1	EO330252	COIL FIX 1 EL0606SKI 100μH K
6-L2,3	EO330249	COIL FIX 1 EL0606SKI 8.2μH K
6-DL1	EI330612	DL EFD-EN645A12G
6-X1	EI318384	OSC X'TAL NC-18C 3.579545MHz
6-R7	ER323487	R MF H F10 1/4W 1503F
6-R8	ER318323	R MF H F10 1/4W 1803F
6-R9	ER330273	R MF H F10 1/4W 1693F
6-R10	ER330274	R MF H F10 1/4W 2003F
6-R11	ER323487	R MF H F10 1/4W 1503F
6-R12	ER330273	R MF H F10 1/4W 1693F
6-R13	ER329282	R MF H F10 1/4W 2702F
6-R14	ER330272	R MF H F10 1/4W 3302F
6-R15	ER329282	R MF H F10 1/4W 2702F
6-R16	ER330272	R MF H F10 1/4W 3302F

7. FRONT PANEL BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
7-1	BDV1004A430C	PANEL FRONT BLK VS-5EA
7-2	BDV1004A430D	PANEL FRONT BLK VS-5EO
7-3	BDV1004A430F	PANEL FRONT BLK VS-5EGN
7-4	SPB328670A	PANEL FRONT VS-5 (ENGLISH) PART (EA/EO)
7-5	SPB328670C	PANEL FRONT VS-5 (EGN) PART
7-6	BDB327392C	PANEL DISPLAY VS-5EA PART
7-7	SP327471B	PANEL FUNCTION (B) (TV-VIDEO)(EA)
7-8	BDB327392E	PANEL DISPLAY VS-5EO PART
7-9	SP327469A	PANEL FUNCTION (A) (ENGLISH)(EO)
7-10	BDB327392D	PANEL DISPLAY VS-5EGN PART
7-11	SP327471A	PANEL FUNCTION (B) (NTSC-PAL) (EGN)

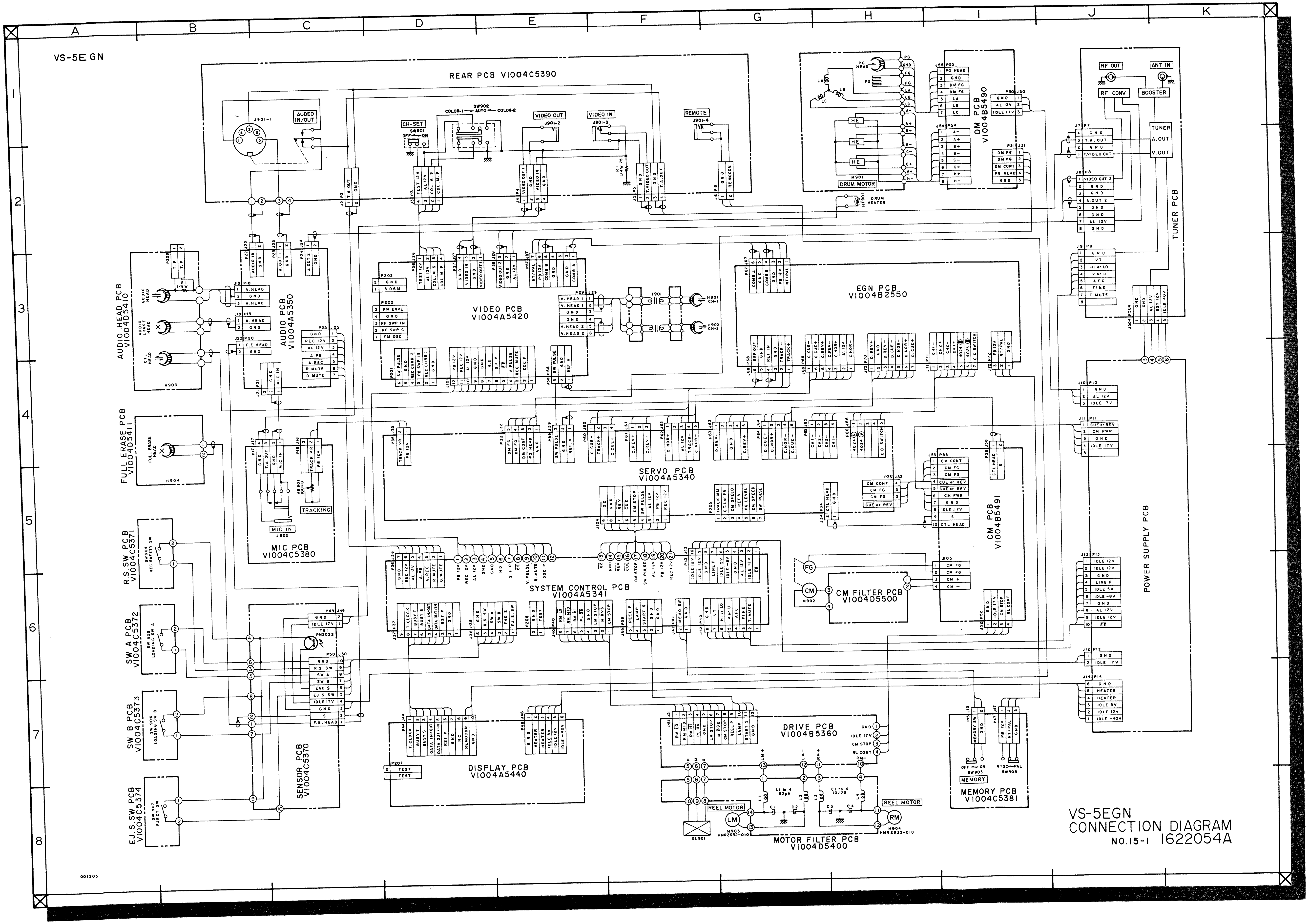
8. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
8-1	SP328221	PANEL REAR VS-5EA
8-2	SP328220D	PANEL REAR VS-5EO
8-3	SPB328220C	PANEL REAR VS-5EGN PART
8-4	ES327686	KNOB PUSH (EA/EGN)
8-5	EW315767	⚠ AC CORD 2 CORES KP-419C/KS-15 E (EO/EGN)
8-6	EW322401	⚠ AC CORD 2 CORES KP-560/S-15 S (EA)

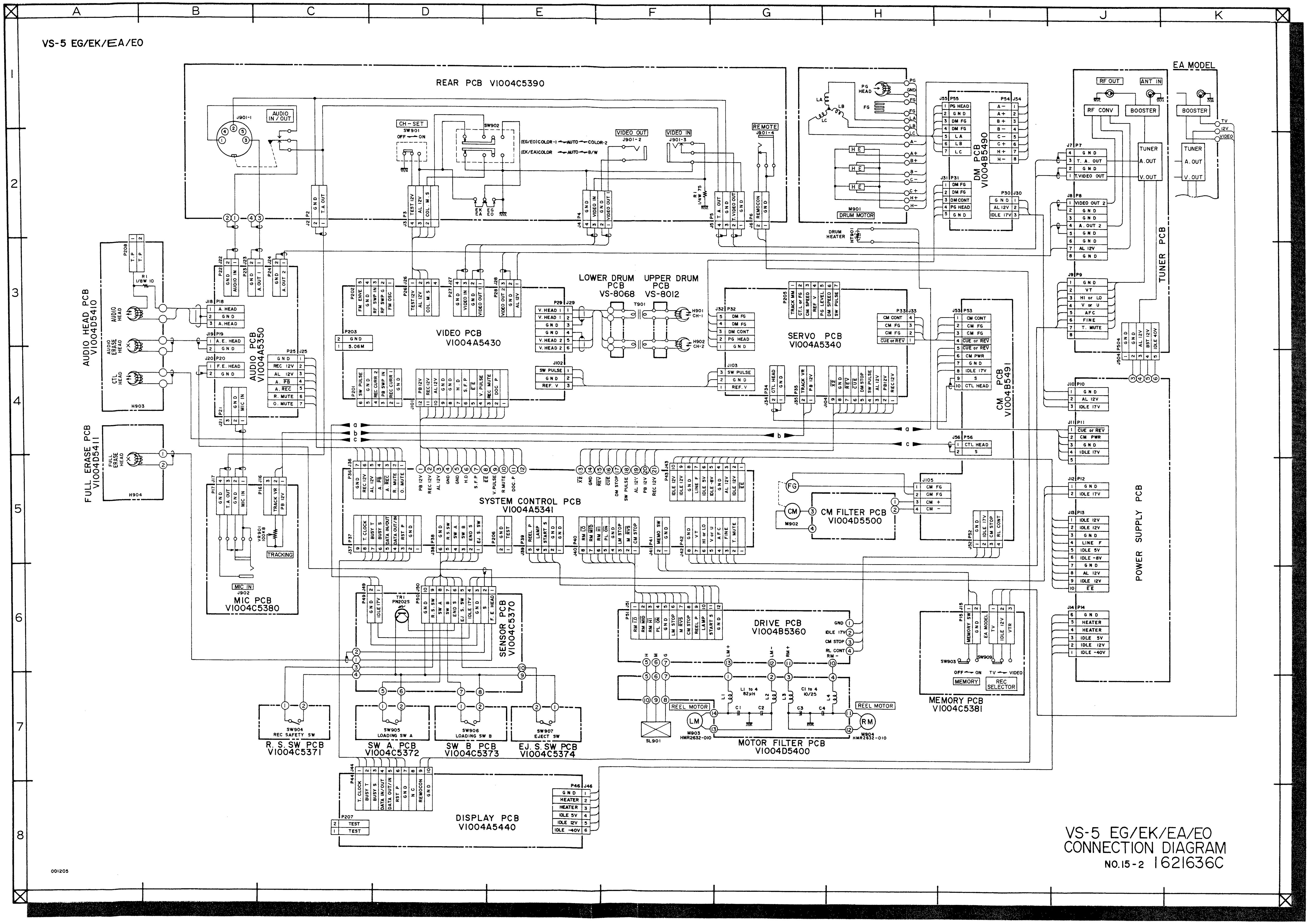
SECTION 3

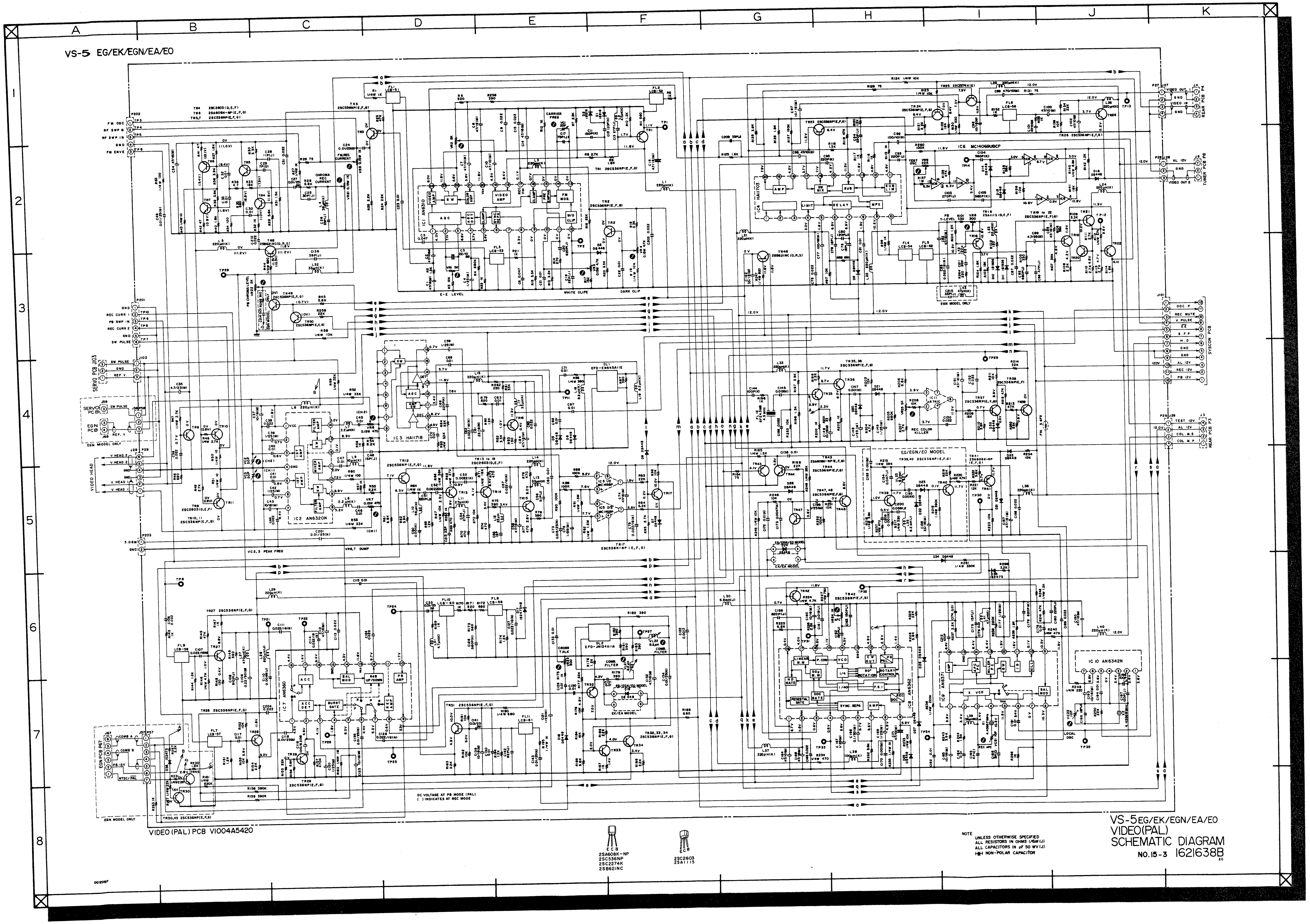
SCHEMATIC DIAGRAM

1. VS-5 EGN No. 15-1 1622054A CONNECTION DIAGRAM
2. VS-5 EG/EK/EA/EO No. 15-2 1621636C CONNECTION DIAGRAM
3. VS-5 EG/EK/EGN/EA/EO No. 15-3 1621638B VIDEO (PAL) SCHEMATIC DIAGRAM
4. VS-5 EG/EK/S/EGN/EA/EO No. 15-4 1621640B SYSCON SCHEMATIC DIAGRAM
5. VS-5 EGN No. 15-5 1622055A SERVO SCHEMATIC DIAGRAM
6. VS-5 EG/EK/S/EA/EO No. 15-6 1621641B SERVO PCB SCHEMATIC DIAGRAM
7. VS-5 EG/EK/S/EGN/EA/EO No. 15-7 1621639B AUDIO PCB SCHEMATIC DIAGRAM
8. VS-5 EG/EK/EGN/EO/EA No. 15-8 1621642B DISPLAY, RC-V5 SHEMATIC DIAGRAM
9. VS-5 EG/EK/S/EGN/EA/EO No. 15-9 1621643B DRIVE PCB SCHEMATIC DIAGRAM
10. VS-5 EG/EK/S/EGN/EA/EO No. 15-10 1621644B DRUM/CAPSTAN MOTOR SCHEMATIC DIAGRAM
11. VS-5 EG/EK/S/EGN/EA/EO No. 15-11 1621645C POWER SUPPLY SCHEMATIC DIAGRAM
12. VS-5 EG/EGN No. 15-12 1621646A TUNER SCHEMATIC DIAGRAM
13. VS-5 EA No. 15-13 1622056A TUNER SCHEMATIC DIAGRAM
14. VS-5 EO No. 15-14 1622057A TUNER SCHEMATIC DIAGRAM
15. VS-5 EGN No. 15-15 1622058A EGN PCB SCHEMATIC DIAGRAM


VS-5E GN
REAR PCB V1004C5390
AUDEO IN/OUT
CH-SET
VIDEO OUT
VIDEO IN
REMOTE
DM PCB V1004B5490
DRUM MOTOR
DRUM HEATER
RF OUT
ANT IN
RF CONV
BOOSTER
TUNER
TUNER PCB
AUDIO HEAD PCB V1004D5410
AUDIO PCB V1004A5350
VIDEO PCB V1004A5420
EGN PCB V1004B2550
FULL ERASE PCB V1004D5411
MIC PCB V1004C5380
TRACKING
MIC IN
SERVO PCB V1004A5340
CM PCB V1004B5491
R.S. SW PCB V1004C5371
SW A PCB V1004C5372
SW B PCB V1004C5373
EJ.S.SW PCB V1004C5374
SENSOR PCB V1004C5370
SYSTEM CONTROL PCB V1004A5341
CM FILTER PCB V1004D5500
POWER SUPPLY PCB
DISPLAY PCB V1004A5440
DRIVE PCB V1004B5360
MEMORY PCB V1004C5381
REEL MOTOR
MOTOR FILTER PCB V1004D5400
001205

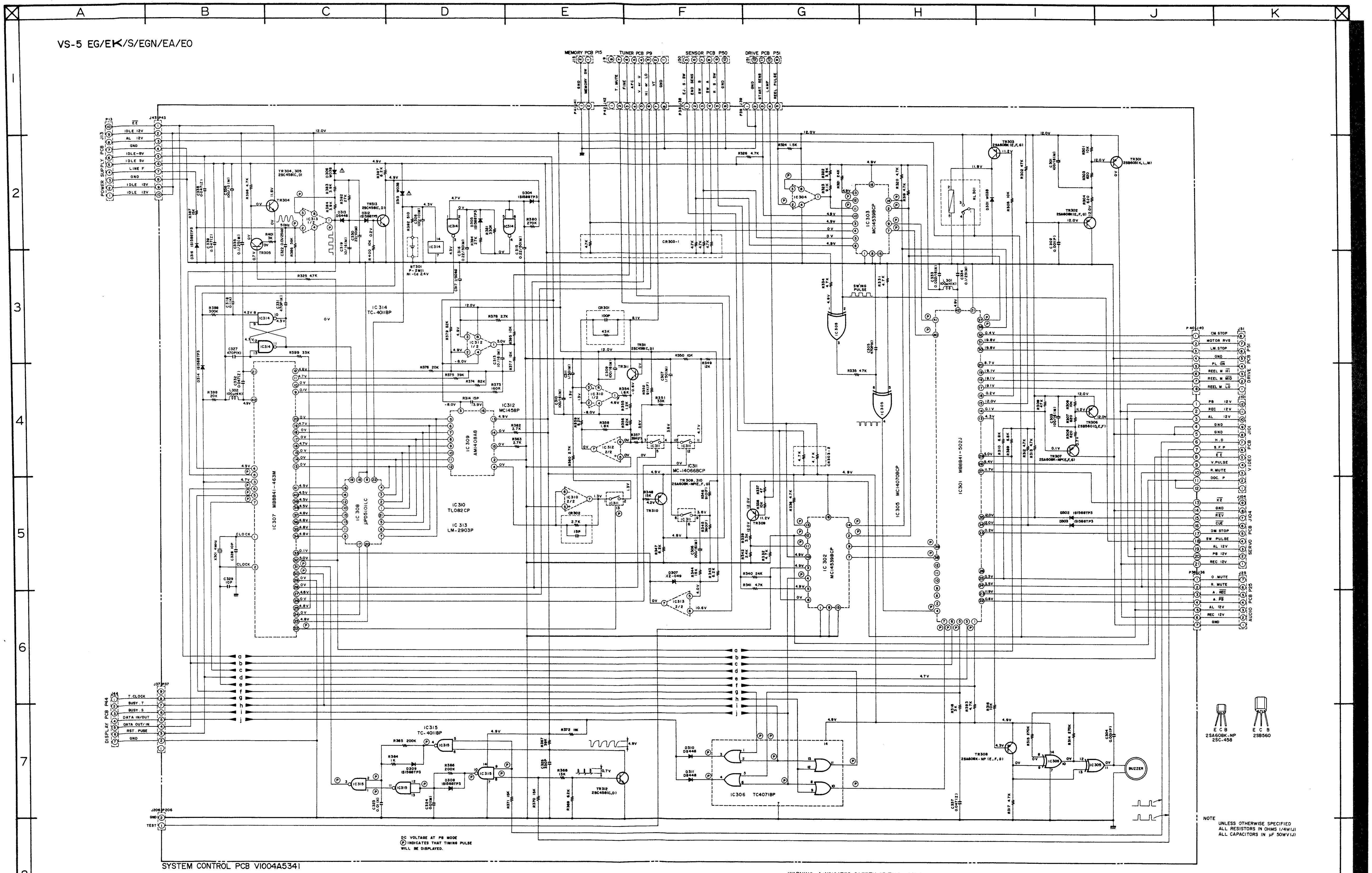
VS-5EGN
CONNECTION DIAGRAM
NO.15-1 1622054A


VS-5 EG/EK/EA/EO
REAR PCB V1004C5390
AUDIO IN/OUT
J901-1
CH-SET
SW901
SW902
VIDEO OUT
J901-2
VIDEO IN
J901-3
REMOTE
J801-4
M901
DRUM MOTOR
DM PCB
V1004B5490
EA MODEL
RF OUT
ANT IN
RF CONV
BOOSTER
TUNER
TUNER PCB
AUDIO HEAD PCB
V1004D5410
AUDIO PCB
V1004A5350
VIDEO PCB
V1004A5430
LOWER DRUM PCB
VS-8068
UPPER DRUM PCB
VS-8012
SERVO PCB
V1004A5340
CM PCB
V1004B5491
FULL ERASE PCB
V1004D5411
MIC PCB
V1004C5380
TRACKING
MIC IN
J902
SYSTEM CONTROL PCB
V1004A5341
CM FILTER PCB
V1004D5500
M902
POWER SUPPLY PCB
SENSOR PCB
V1004C5370
DRIVE PCB
V1004B5360
MEMORY PCB
V1004C5381
MEMORY
REC SELECTOR
SW904
REC SAFETY SW
R. S. SW PCB
V1004C5371
SW905
LOADING SW A
SW A. PCB
V1004C5372
SW906
LOADING SW B
SW B PCB
V1004C5373
SW907
EJECT SW
EJ. S. SW PCB
V1004C5374
REEL MOTOR
M903
HMR2632-010
M904
HMR2632-010
SL901
MOTOR FILTER PCB
V1004D5400
DISPLAY PCB
V1004A5440
001205
VS-5 EG/EK/EA/EO
CONNECTION DIAGRAM
NO.15-2 1621636C


A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
VS-5 EG/EK/EGN/EA/EO
IC1 AN6310
IC2 AN6320N
IC3 HA11718
IC4 HA11703
IC6 MC14066UBCP
IC7 AN6360
IC8 AN6362
IC9 AN6371
IC10 AN6342N
FM OSC
RF SWP O
RF SWP IN
GND
FM ERVE
REC CURR 1
PB SWP IN
REC CURR 2
SW PULSE
SERVO PCB J103
SERVO PCB
EGN PCB
EGN MODEL ONLY
VIDEO HEAD
V. HEAD 1
V. HEAD 2
EGN PCB P67
COMB A
COMB B
PB 12V
NTSC/PAL
VIDEO (PAL) PCB VI004A5420
REAR PCB P4
VIDEO OUT 1
VIDEO IN
TUNER PCB P8
AL 12V
VIDEO OUT 2
SYSCON PCB
OSC P
REC MUTE
V. PULSE
S.F.P
H.D
REC 12V
PB 12V
REAR PCB P5
TEST 12V
COL M.S
COL M.P
E-E LEVEL
WHITE CLIPE
DARK CLIP
EGN MODEL ONLY
EG/EGN/EO MODEL
EK/EA MODEL
CROSS TALK
COMB. FILTER
LOCAL OSC
REC COLOR KILLER
VCZ,3 PEAK FREQ
VR6,7 DUMP
CARRIER FREQ
CHROMA REC CURRENT
FM REC CURRENT
PB CHROMA LEVEL
DC VOLTAGE AT PB MODE (PAL)
( ) INDICATES AT REC MODE
E C B
2SA608K-NP
2SC536NP
2SC2274K
2SB621NC
E C B
2SC2603
2SA1115
001206F

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (J)
NON-POLAR CAPACITOR

VS-5 EG/EK/EGN/EA/EO
VIDEO(PAL)
SCHEMATIC DIAGRAM
NO.15-3 1621638B
2C

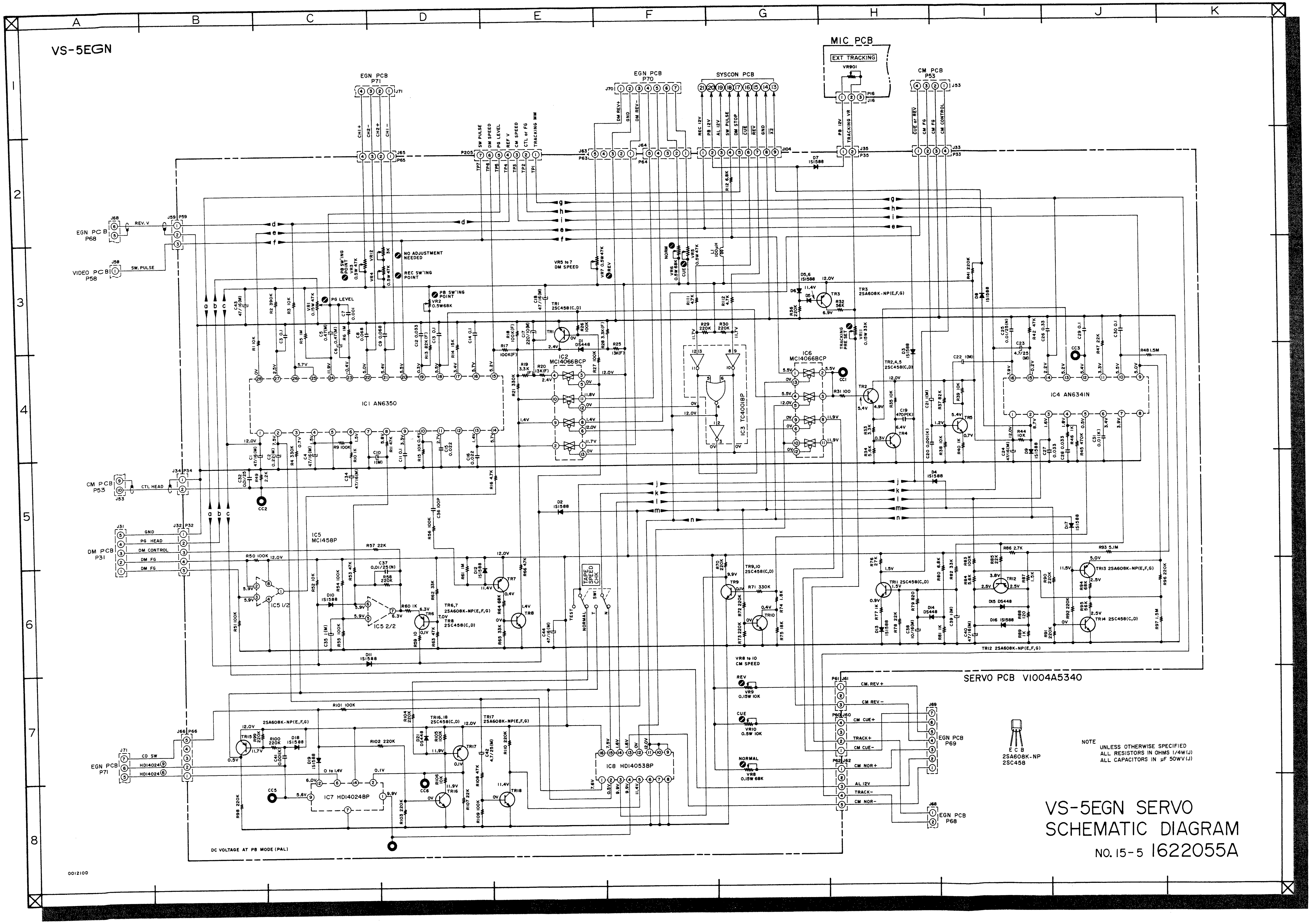

VS-5 EG/EK/S/EGN/EA/EO
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
MEMORY PCB P15
TUNER PCB P9
SENSOR PCB P50
DRIVE PCB P51
POWER SUPPLY PCB J13
DRIVE PCB P51
VIDEO PCB J101
SERVO PCB J104
AUDIO PCB P25
DISPLAY PCB P44
IC314 TC-4011BP
IC312 MC1458P
IC309 AM1408A8
IC307 MB8841-463M
IC308 μPD501LC
IC310 TL082CP
IC313 LM-2903P
IC311 MC-14066BCP
IC303 MC14539BCP
IC305 MC14070BCP
IC301 MB8841-502J
IC302 MC14539BCP
IC315 TC-4011BP
IC306 TC4071BP
BUZZER
2SA608K-NP 2SC-458
2SB560
SYSTEM CONTROL PCB V1004A5341
DC VOLTAGE AT PB MODE
Ⓟ INDICATES THAT TIMING PULSE WILL BE DISPLAYED.
0012090

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

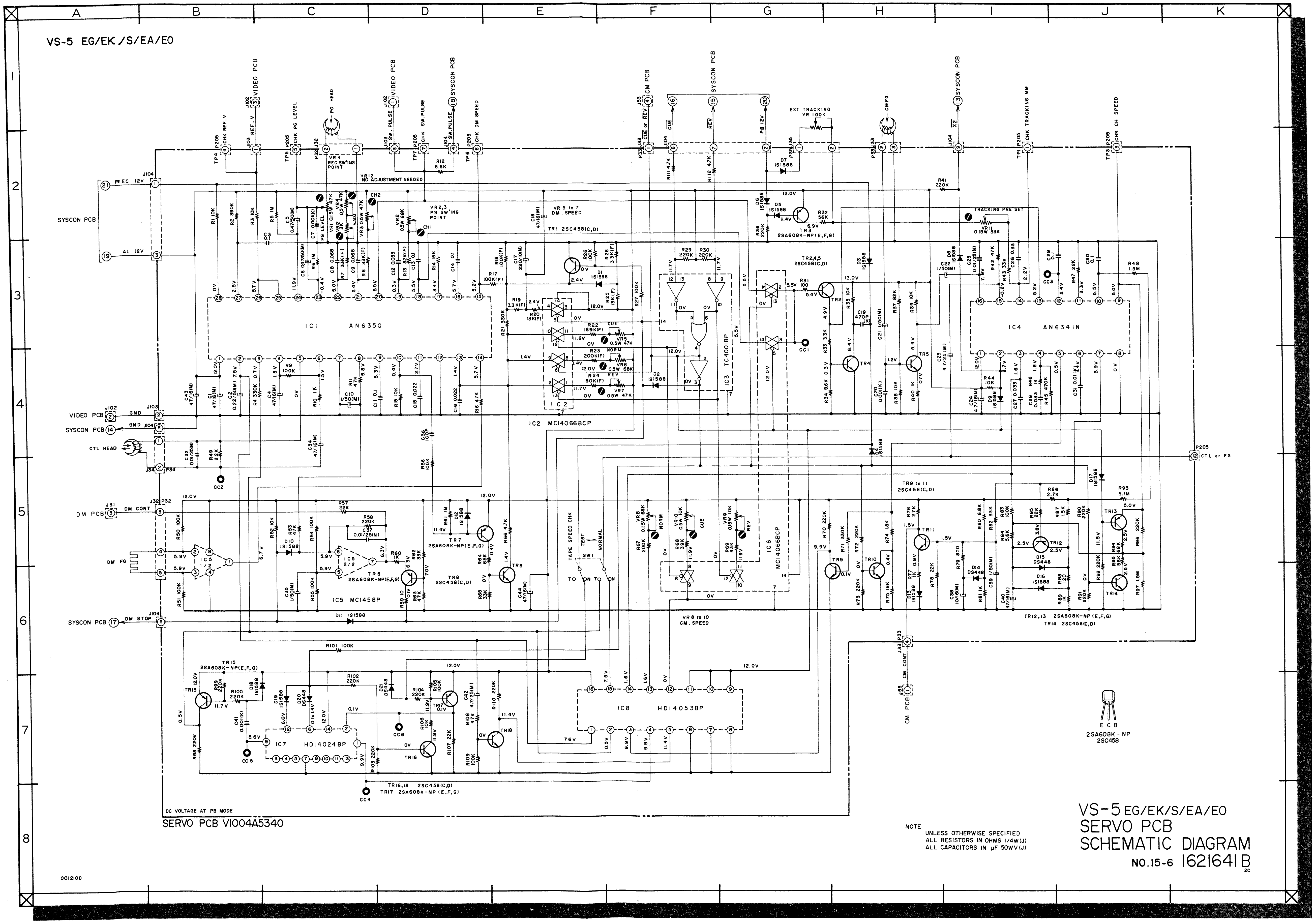
AVERTISSEMENT: ⚠IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES CONPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

VS-5 EG/EK/S/EGN/EA/EO SYSCON
SCHEMATIC DIAGRAM NO.15-4 1621640B
2C


VS-5EGN
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
EGN PCB P71
J71
EGN PCB P70
J70
SYSCON PCB
MIC PCB
EXT TRACKING
VR901
P16
J16
CM PCB P53
J53
CH1+
CH2-
CH2+
CH1-
J65
P65
P205
SW PULSE
SW SPEED
PG LEVEL
REF V
CM SPEED
CTL or FG
TRACKING MM
TP7
TP6
TP5
TP4
TP3
TP2
TP1
J63
P63
J64
P64
DM REV+
GND
DM REV-
REC 12V
PB 12V
AL 12V
SW PULSE
DM STOP
CUE
REV
GND
X2
J104
D7 1S1588
PB 12V
TRACKING VR
J35
P35
CUE or REV
CM FG
CM FG
CM CONTROL
J33
P33
EGN PCB P68
J68
REV. V
J59
P59
VIDEO PCB P58
J58
SW. PULSE
NO ADJUSTMENT NEEDED
REC SW'ING POINT
PB SW'ING POINT
PG LEVEL
PB SW'ING POINT
VR2 0.5W68K
VR5 to 7 DM SPEED
VR7 0.5W47K
REV
NORM
CUE
TR3 2SA608K-NP(E,F,G)
D5,6 1S1588
TR1 2SC458(C,D)
IC1 AN6350
IC2 MC14066BCP
IC3 TC4001BP
IC6 MC14066BCP
TRACKING PRE SET
VR13 0.15W33K
TR2,4,5 2SC458(C,D)
IC4 AN6341N
CC1
CC2
CC3
CM PCB P53
J34
P34
J53
CTL HEAD
DM PCB P31
J31
J32
P32
GND
PG HEAD
DM CONTROL
DM FG
DM FG
IC5 MC1458P
IC5 1/2
IC5 2/2
TR6,7 2SA608K-NP(E,F,G)
TR8 2SC458(C,D)
TAPE SPEED CHK
TEST
NORMAL
SW1
TR9,10 2SC458(C,D)
TR11 2SC458(C,D)
TR12 2SA608K-NP(E,F,G)
TR13 2SA608K-NP(E,F,G)
TR14 2SC458(C,D)
VR8 to 10 CM SPEED
REV
VR9 0.15W 10K
CUE
VR10 0.5W 10K
NORMAL
VR8 0.15W 68K
SERVO PCB V1004A5340
P61
J61
CM. REV+
CM REV-
P60
J60
CM CUE+
TRACK+
CM CUE-
P62
J62
CM NOR+
AL 12V
TRACK-
CM NOR-
J69
EGN PCB P69
J68
EGN PCB P68
EGN PCB P71
J71
CD SW
HD14024⑥
HD14024⑤
J66
P66
TR15
2SA608K-NP(E,F,G)
TR16,18 2SC458(C,D)
TR17 2SA608K-NP(E,F,G)
IC7 HD14024BP
IC8 HD14053BP
CC5
CC6
DC VOLTAGE AT PB MODE (PAL)
0012100
E C B
2SA608K-NP
2SC458

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN µF 50WV(J)

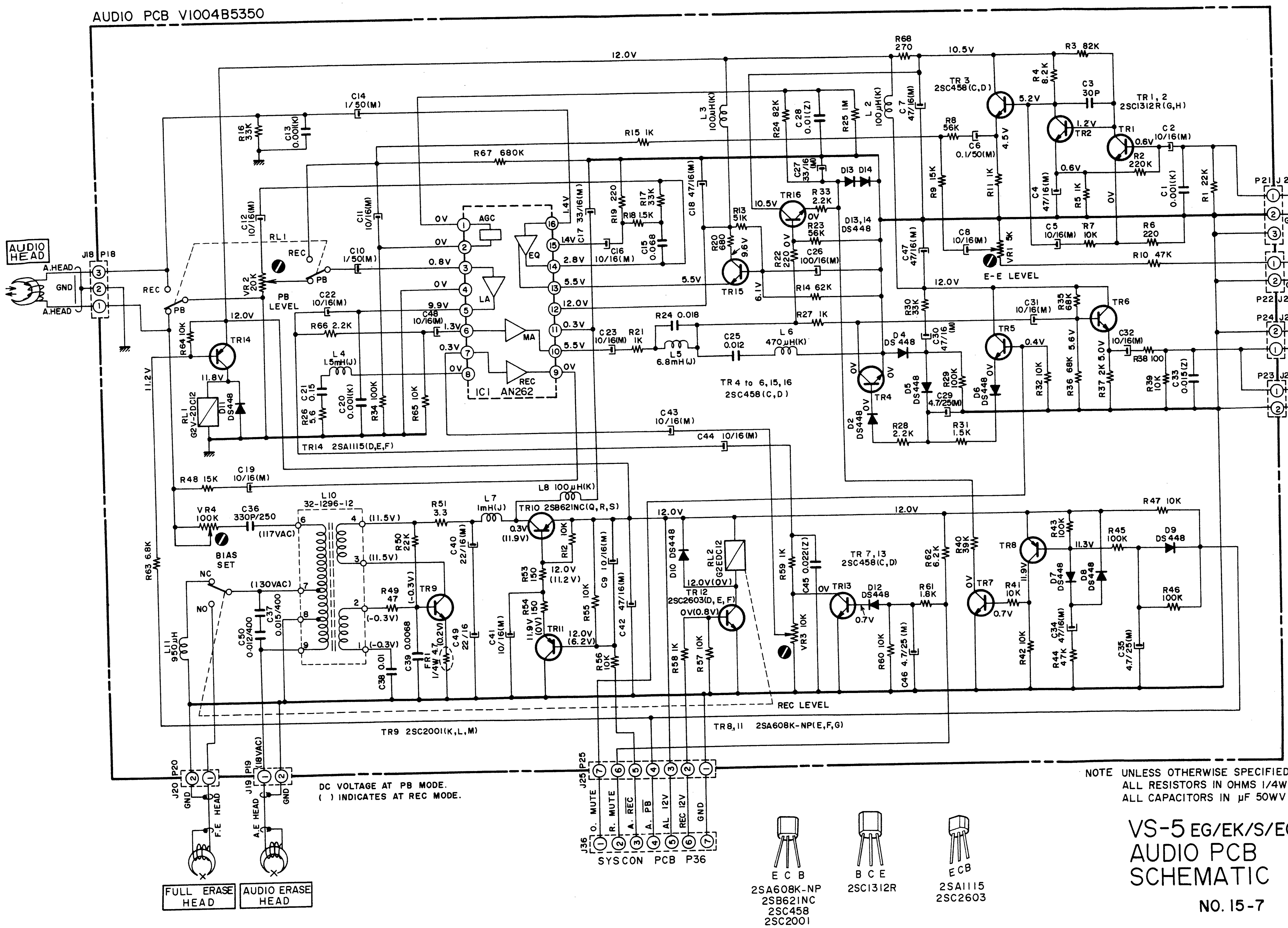
VS-5EGN SERVO
SCHEMATIC DIAGRAM
NO. 15-5 1622055A


A
B
C
D
E
F
G
H
I
J
K
VS-5 EG/EK/S/EA/EO
SYSCON PCB
REC 12V
AL 12V
J104
VIDEO PCB
SYSCON PCB
GND
CTL HEAD
DM PCB
DM CONT
DM FG
DM STOP
J102
J103
J31
J32
J34
P32
P34
CHK REF. V
REF. V
CHK PG LEVEL
PG HEAD
SW. PULSE
CHK SW. PULSE
CHK DM SPEED
CUE or REV
CM PCB
CUE
REV
PB 12V
EXT TRACKING VR 100K
CM FG
X2
CHK TRACKING MM
CHK CM SPEED
VR 4 REC SW'ING POINT
VR12 NO ADJUSTMENT NEEDED
VR 2,3 PB SW'ING POINT
VR 5 to 7 DM. SPEED
VR 8 to 10 CM. SPEED
TRACKING PRE SET
IC1 AN6350
IC2 MC14066BCP
IC3 TC4001BP
IC4 AN6341N
IC5 MC1458P
IC6 MC14066BCP
IC7 HD14024BP
IC8 HD14053BP
TR1 2SC458(C,D)
TR2,4,5 2SC458(C,D)
TR3 2SA608K-NP(E,F,G)
TR6 2SA608K-NP(E,F,G)
TR7 2SA608K-NP(E,F,G)
TR8 2SC458(C,D)
TR9 to 11 2SC458(C,D)
TR12,13 2SA608K-NP(E,F,G)
TR14 2SC458(C,D)
TR15 2SA608K-NP(E,F,G)
TR16,18 2SC458(C,D)
TR17 2SA608K-NP(E,F,G)
TAPE SPEED CHK
TEST
NORMAL
SW1
CTL or FG
NORM
CUE
REV
CC1
CC2
CC3
CC4
CC5
CC6
CH1
CH2
E C B
2SA608K-NP
2SC458
DC VOLTAGE AT PB MODE
SERVO PCB V1004A5340
0012100

VS-5 EG/EK/S/EA/EO
SERVO PCB
SCHEMATIC DIAGRAM
NO.15-6 1621641B 2C

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

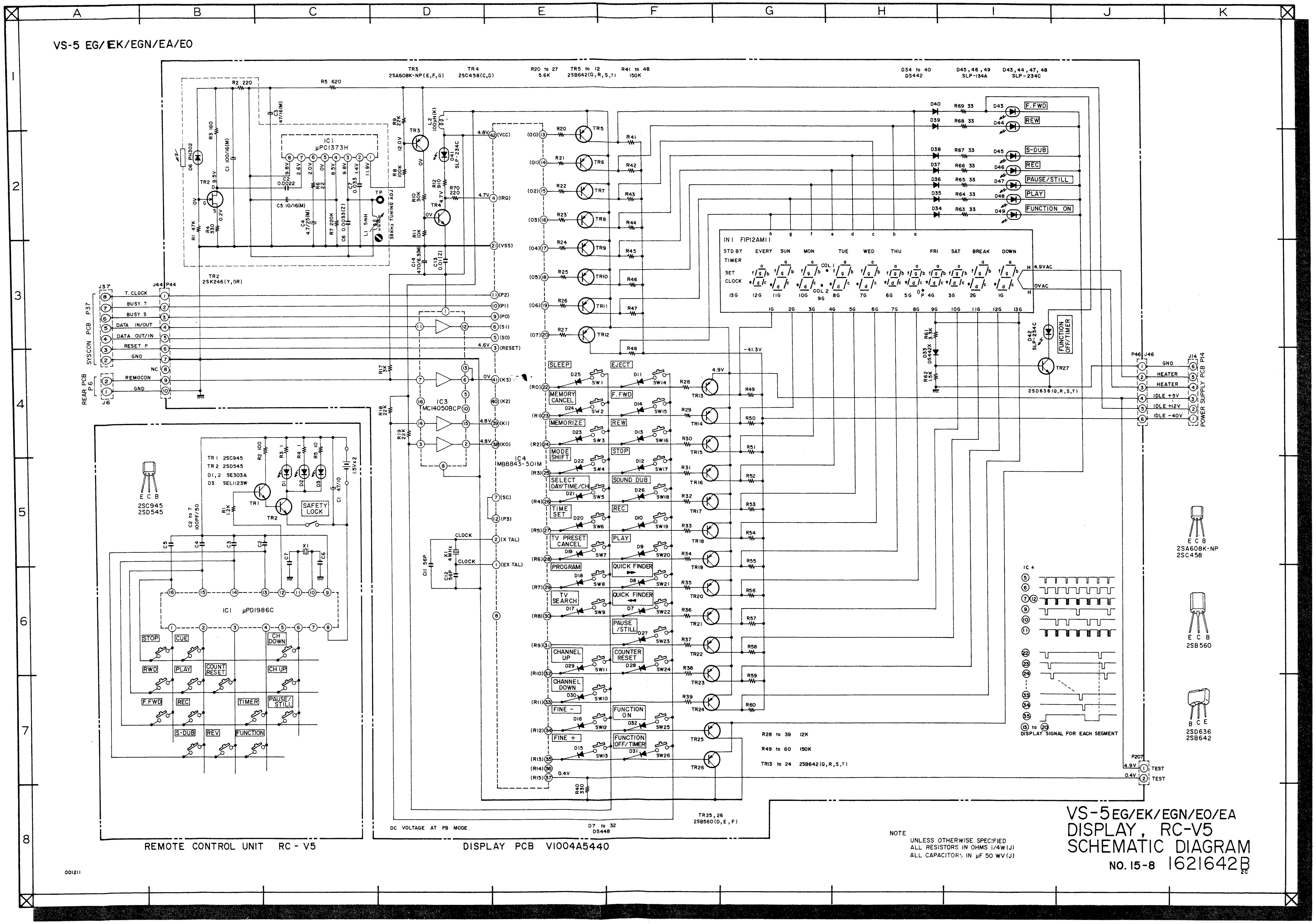
VS-5 EG/EK/S/EGN/EA/EO


AUDIO PCB V1004B5350
AUDIO HEAD
A.HEAD
GND
J18 P18
REC
PB
PB LEVEL
VR2 20K
RL1
C14 1/50(M)
R16 33K
C13 0.001(K)
R67 680K
R15 1K
12.0V
AGC
EQ
LA
MA
REC
IC1 AN262
R66 2.2K
L4 1.5mH(J)
C21 0.15
R26 5.6
C20 0.001(K)
R34 100K
R65 10K
TR14 2SA1115(D,E,F)
RL1 G2V-2DC12
D11 DS448
R64 10K
TR14
11.8V
11.2V
C43 10/16(M)
C44 10/16(M)
R48 15K
C19 10/16(M)
VR4 100K
C36 330P/250
BIAS SET
L10 32-1296-12
R51 3.3
L7 1mH(J)
L8 100μH(K)
TR10 2SB621NC(Q,R,S)
R50 22K
C40 22/16(M)
R49 47
TR9
C38 0.01
C39 0.0068
FR1 4.7 1/4W
C49 22/16
C41 10/16(M)
R53 150
R54 150
TR11
R55 10K
C9 10/16(M)
C42 47/16(M)
R56 10K
L11 950μH
C50 0.012/400
C37 0.015/400
R63 6.8K
TR9 2SC2001(K,L,M)
TR8,11 2SA608K-NP(E,F,G)
REC LEVEL
D10 DS448
RL2 G2EDC12
TR12 2SC2603(D,E,F)
R58 1K
R57 10K
R59 1K
C45 0.022(Z)
VR3 10K
TR7,13 2SC458(C,D)
TR13
D12 DS448
R60 10K
C46 4.7/25(M)
R61 1.8K
R62 6.2K
R40 39K
TR7
R41 10K
R42 10K
TR8
R43 100K
D7 DS448
D8 DS448
C34 47/16(M)
R44 4.7K
R45 100K
D9 DS448
R47 10K
R46 100K
C35 4.7/25(M)
R68 270
10.5V
R3 82K
R4 8.2K
TR3 2SC458(C,D)
C3 30P
TR1,2 2SC1312R(G,H)
TR1
TR2
C2 10/16(M)
R2 220K
L3 100μH(K)
R24 82K
C28 0.01(Z)
R25 1M
L2 100μH(K)
C7 47/16(M)
R8 56K
C6 0.1/50(M)
R9 15K
R11 1K
C4 47/16(M)
R5 1K
C1 0.001(K)
R1 22K
C27 33/16(M)
D13,14 DS448
TR16
R33 2.2K
R23 56K
C26 100/16(M)
R13 51K
R20 680
R22 220
TR15
R14 62K
C18 47/16(M)
R19 220
R18 1.5K
R17 33K
C15 0.068
C16 10/16(M)
C17 33/16(M)
C8 10/16(M)
VR1 5K
E-E LEVEL
C5 10/16(M)
R7 10K
R6 220
R10 47K
C47 47/16(M)
R30 33K
C31 10/16(M)
R35 68K
TR6
TR5
C32 10/16(M)
R38 100
R39 10K
C33 0.015(Z)
R24 0.018
C23 10/16(M)
R21 1K
L5 6.8mH(J)
C25 0.012
L6 470μH(K)
R27 1K
D4 DS448
C30 47/16(M)
D5 DS448
R29 100K
C29 4.7/25(M)
D6 DS448
TR4
D2 DS448
R28 2.2K
R31 1.5K
R32 10K
R36 68K
R37 2K
TR4 to 6,15,16 2SC458(C,D)
P21 J21
MIC IN
J17 MIC PCB P17
AUDIO IN
REAR PCB
P22 J22
P24 J24
A.OUT 2
J8 TUNER PCB P8
P23 J23
A.OUT 1
P20 J20
F.E HEAD
P19 J19
A.E HEAD
FULL ERASE HEAD
AUDIO ERASE HEAD
DC VOLTAGE AT PB MODE.
( ) INDICATES AT REC MODE.
J25 P25
J36
O. MUTE
R. MUTE
A. REC
A. PB
AL 12V
REC 12V
GND
SYSCON PCB P36
E C B
2SA608K-NP
2SB621NC
2SC458
2SC2001
B C E
2SC1312R
E C B
2SA1115
2SC2603

NOTE UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

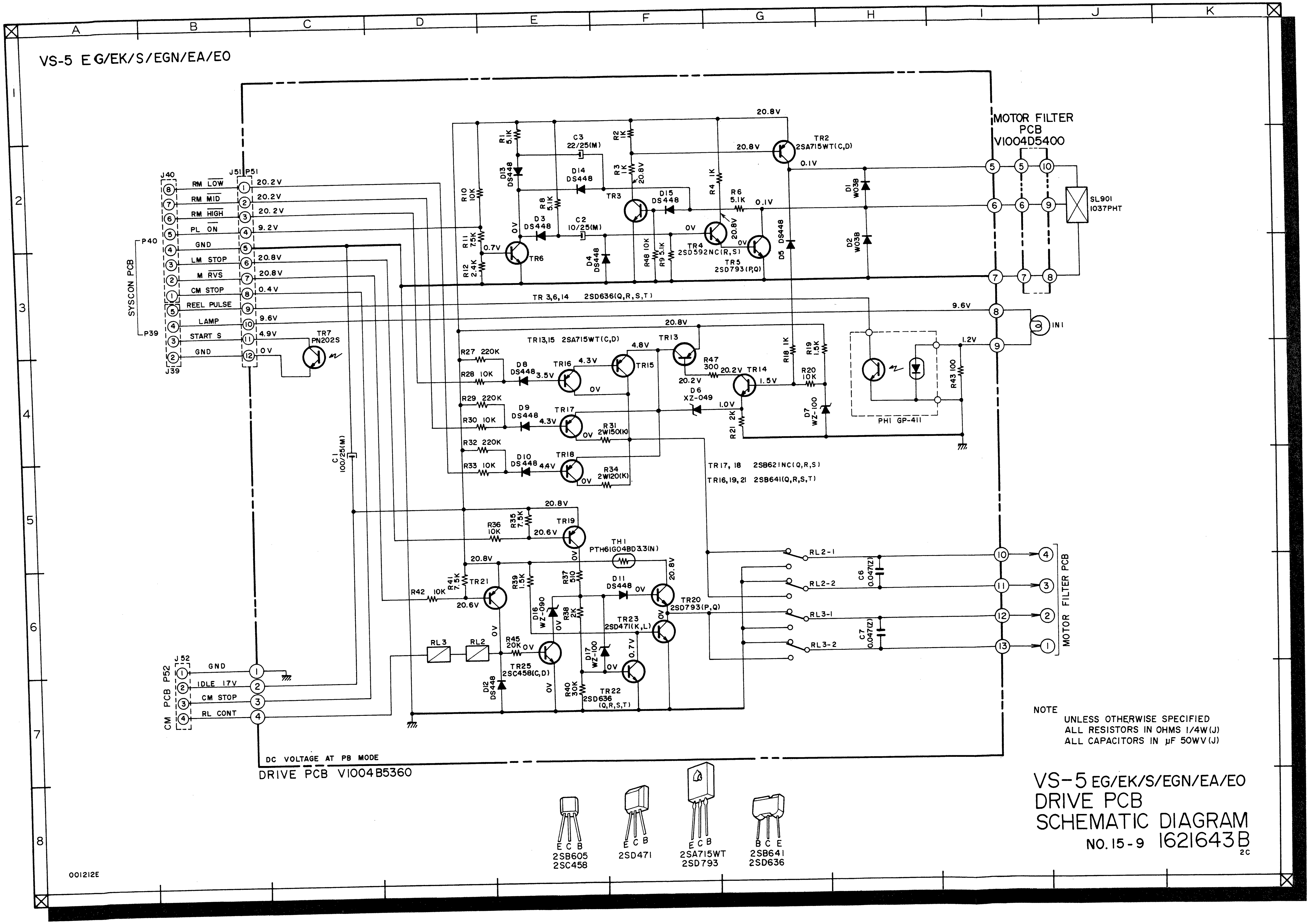
VS-5 EG/EK/S/EGN/EA/EO
AUDIO PCB
SCHEMATIC DIAGRAM
NO. 15-7 1621639B
2C

001208F


VS-5 EG/EK/EGN/EA/EO
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
IC1 µPC1373H
TR2 2SK246(Y,GR)
TR3 2SA608K-NP(E,F,G)
TR4 2SC458(C,D)
R20 to 27 5.6K
TR5 to 12 2SB642(Q,R,S,T)
R41 to 48 150K
D34 to 40 DS442
D45,46,49 SLP-134A
D43,44,47,48 SLP-234C
38kHz TUNING ADJ
SYSCON PCB P37
T.CLOCK
BUSY.T
BUSY.S
DATA IN/OUT
DATA OUT/IN
RESET P
GND
NC
REMOCON
REAR PCB P6
IC3 MC14050BCP
IC4 MB8843-501M
IN1 FIP12AM11
STD BY
TIMER
SET
CLOCK
EVERY
SUN
MON
TUE
WED
THU
FRI
SAT
BREAK
DOWN
COL 1
COL 2
F.FWD
REW
S-DUB
REC
PAUSE/STILL
PLAY
FUNCTION ON
FUNCTION OFF/TIMER
SLEEP
EJECT
MEMORY CANCEL
MEMORIZE
MODE SHIFT
SELECT DAY/TIME/CH
SOUND DUB
TIME SET
TV PRESET CANCEL
PROGRAM
QUICK FINDER
TV SEARCH
COUNTER RESET
CHANNEL UP
CHANNEL DOWN
FINE −
FINE +
STOP
R28 to 39 12K
R49 to 60 150K
TR13 to 24 2SB642(Q,R,S,T)
TR25,26 2SB560(D,E,F)
D7 to 32 DS448
TR27 2SD636(Q,R,S,T)
POWER SUPPLY PCB P14
HEATER
IDLE +5V
IDLE +12V
IDLE −40V
TEST
IC4
DISPLAY SIGNAL FOR EACH SEGMENT
2SA608K-NP
2SC458
2SB560
2SD636
2SB642
2SC945
2SD545
TR1 2SC945
TR2 2SD545
D1,2 SE303A
D3 SEL1123W
SAFETY LOCK
IC1 µPD1986C
CUE
CH DOWN
RWD
COUNT RESET
CH UP
TIMER
S-DUB
REV
FUNCTION
DC VOLTAGE AT PB MODE.
REMOTE CONTROL UNIT RC-V5
DISPLAY PCB V1004A5440
001211

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN µF 50 WV(J)

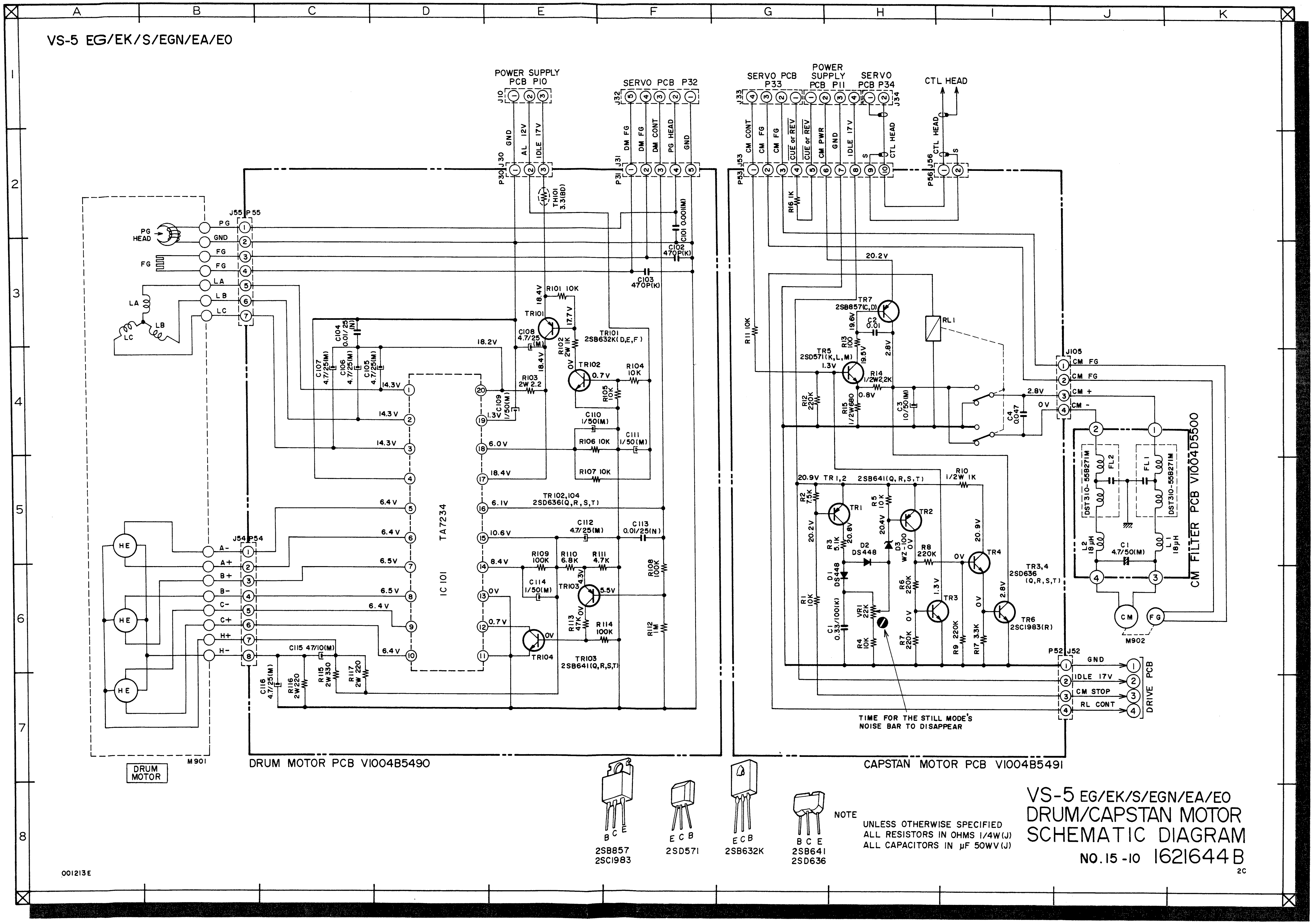
VS-5 EG/EK/EGN/EO/EA
DISPLAY, RC-V5
SCHEMATIC DIAGRAM
NO. 15-8 1621642B


VS-5 EG/EK/S/EGN/EA/EO
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
MOTOR FILTER PCB V1004D5400
SL901 1037PHT
SYSCON PCB
P40
P39
J40
J39
J51
P51
RM LOW
RM MID
RM HIGH
PL ON
GND
LM STOP
M RVS
CM STOP
REEL PULSE
LAMP
START S
GND
20.2V
20.2V
20.2V
9.2V
20.8V
20.8V
0.4V
9.6V
4.9V
0V
TR7 PN202S
C1 100/25(M)
R1 5.1K
R2 1K
C3 22/25(M)
TR2 2SA715WT(C,D)
20.8V
0.1V
D13 DS448
D14 DS448
R3 1K
R10 10K
R8 5.1K
D3 DS448
C2 10/25(M)
TR3
D15 DS448
R4 1K
R6 5.1K
D1 W03B
D2 W03B
R11 7.5K
R12 2.4K
TR6
D4 DS448
R48 10K
R9 5.1K
TR4 2SD592NC(R,S)
TR5 2SD793(P,Q)
D5 DS448
TR 3,6,14 2SD636(Q,R,S,T)
IN1
TR13,15 2SA715WT(C,D)
TR13
R27 220K
R28 10K
D8 DS448
TR16
TR15
R47 300
TR14
R18 1K
R19 1.5K
R20 10K
D6 XZ-049
D7 WZ-100
R43 100
PH1 GP-411
R29 220K
R30 10K
D9 DS448
TR17
R31 2W150(K)
R21 2K
R32 220K
R33 10K
D10 DS448
TR18
R34 2W120(K)
TR17, 18 2SB621NC(Q,R,S)
TR16,19,21 2SB641(Q,R,S,T)
R36 10K
R35 7.5K
TR19
TH1 PTH61G04BD3.3(N)
R41 7.5K
TR21
R42 10K
R39 1.5K
R37 510
D11 DS448
TR20 2SD793(P,Q)
D16 WZ-090
R38 2K
TR23 2SD471(K,L)
RL3
RL2
R45 20K
TR25 2SC458(C,D)
D17 WZ-100
D12 DS448
R40 30K
TR22 2SD636 (Q,R,S,T)
RL2-1
RL2-2
RL3-1
RL3-2
C6 0.047(Z)
C7 0.047(Z)
MOTOR FILTER PCB
CM PCB P52
J52
GND
IDLE 17V
CM STOP
RL CONT
DC VOLTAGE AT PB MODE
DRIVE PCB V1004B5360
E C B
2SB605
2SC458
2SD471
2SA715WT
2SD793
B C E
2SB641
2SD636
001212E

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

VS-5 EG/EK/S/EGN/EA/EO
DRIVE PCB
SCHEMATIC DIAGRAM
NO. 15-9 1621643B
2C

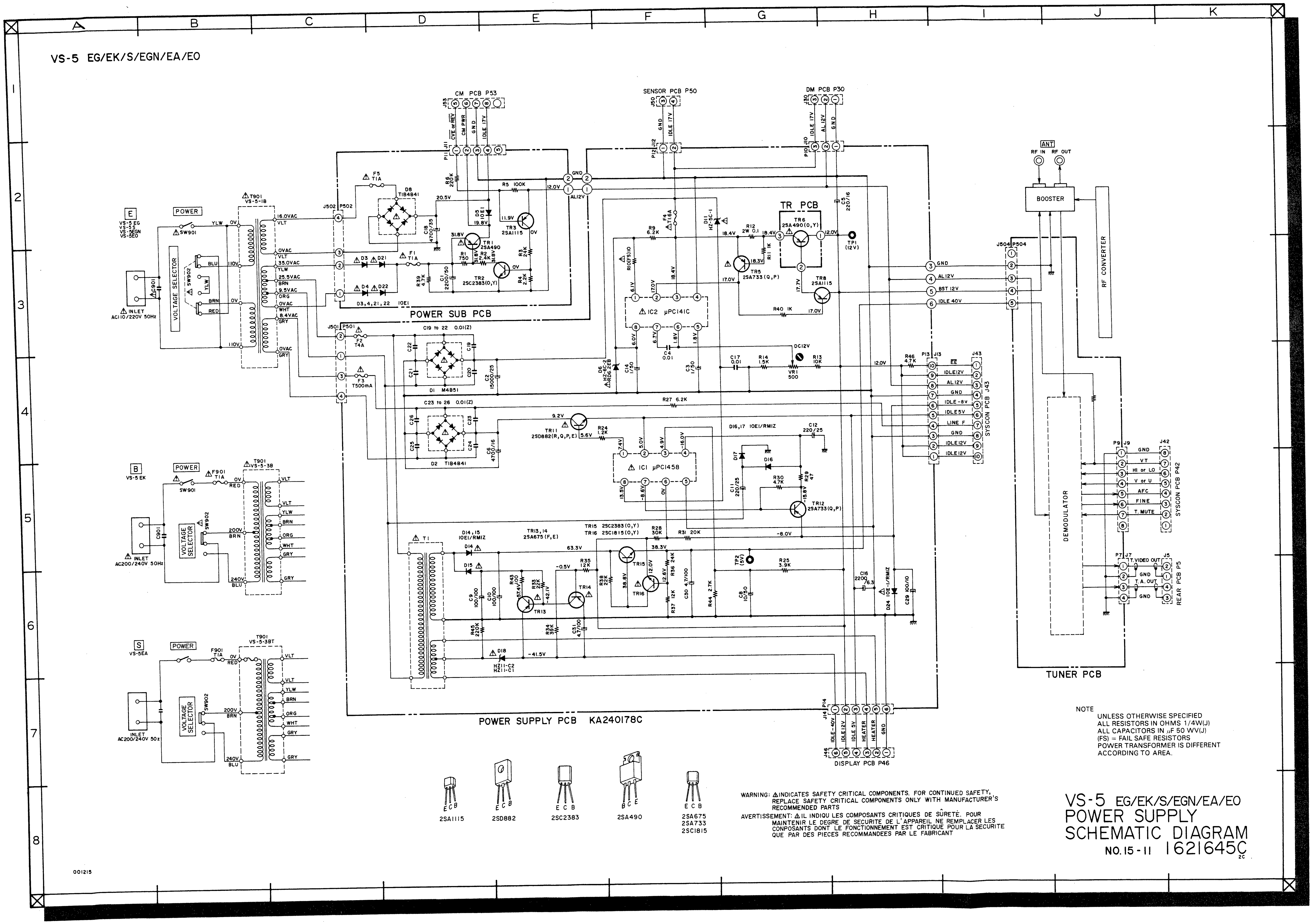
VS-5 EG/EK/S/EGN/EA/EO


A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
POWER SUPPLY PCB P10
J10
GND
AL 12V
IDLE 17V
P30 J30
TH101 3.3(8D)
SERVO PCB P32
J32
DM FG
DM FG
DM CONT
PG HEAD
GND
P31 J31
C101 0.001(M)
C102 470P(K)
C103 470P(K)
SERVO PCB P33
J33
POWER SUPPLY PCB P11
SERVO PCB P34
J34
CM CONT
CM FG
CM FG
CUE or REV
CUE or REV
CM PWR
GND
IDLE 17V
S
CTL HEAD
P53 J53
CTL HEAD
P56 J56
R16 1K
20.2V
J55 P55
PG HEAD
PG
GND
FG
FG
FG
LA
LB
LC
LA
LB
LC
R101 10K
18.4V
TR101
C108 4.7/25 (M)
17.7V
R102 2W 1K
18.4V
TR101 2SB632K(D,E,F)
18.2V
C104 0.01/25 (N)
C107 4.7/25(M)
C106 4.7/25(M)
C105 4.7/25(M)
14.3V
14.3V
14.3V
R103 2W 2.2
TR102
0.7V
0V
R104 10K
R105 10K
C109 1/50(M)
1.3V
C110 1/50(M)
C111 1/50(M)
6.0V
R106 10K
R107 10K
18.4V
TR102,104 2SD636(Q,R,S,T)
6.1V
TA7234
IC 101
6.4V
6.4V
6.5V
6.5V
6.4V
6.4V
10.6V
C112 4.7/25(M)
C113 0.01/25(N)
8.4V
R109 100K
R110 6.8K
R111 4.7K
R108 100K
C114 1/50(M)
TR103
4.3V
5.5V
0V
R113 47K
R114 100K
R112 1M
0.7V
0V
TR104
TR103 2SB641(Q,R,S,T)
J54 P54
HE
HE
HE
A-
A+
B+
B-
C-
C+
H+
H-
C115 47/10(M)
C116 4.7/25(M)
R116 2W 220
R115 2W 330
R117 2W 220
M901
DRUM MOTOR
DRUM MOTOR PCB V1004B5490
R11 10K
TR7 2SB857(C,D)
C2 0.01
R13 100
19.6V
2.8V
RL1
TR5 2SD571(K,L,M)
1.3V
19.5V
R14 1/2W 2.2K
0.8V
R12 22K
R15 1/2W 680
C3 10/50(M)
C4 0.047
2.8V
0V
J105
CM FG
CM FG
CM +
CM -
20.9V
TR1,2 2SB641(Q,R,S,T)
R10 1/2W 1K
R2 7.5K
TR1
R5 10K
TR2
20.2V
R3 5.1K
20.8V
20.4V
D2 DS448
D3 WZ-100
0V
R8 220K
20.9V
0V
TR4
TR3,4 2SD636 (Q,R,S,T)
D1 DS448
R6 220K
1.3V
TR3
0V
2.8V
R1 10K
C1 0.33/100(K)
VR1 22K
R4 10K
R7 220K
R9 220K
R17 3.3K
TR6 2SC1983(R)
P52 J52
GND
IDLE 17V
CM STOP
RL CONT
DRIVE PCB
TIME FOR THE STILL MODE'S NOISE BAR TO DISAPPEAR
CAPSTAN MOTOR PCB V1004B5491
FL2
FL1
DST310-55B271M
DST310-55B271M
L2 18μH
C1 4.7/50(M)
L1 18μH
CM FILTER PCB V1004D5500
CM
FG
M902
B C E
2SB857
2SC1983
E C B
2SD571
E C B
2SB632K
B C E
2SB641
2SD636
001213E
2C

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

VS-5 EG/EK/S/EGN/EA/EO
DRUM/CAPSTAN MOTOR
SCHEMATIC DIAGRAM
NO.15-10 1621644B

VS-5 EG/EK/S/EGN/EA/EO


A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
CM PCB P53
CVE or REV
CM PWR
GND
IDLE 17V
SENSOR PCB P50
DM PCB P30
AL 12V
TR PCB
TR6 2SA490(O,Y)
TR5 2SA733(Q,P)
TR8 2SA1115
TP1 (12V)
IC2 μPC141C
POWER SUB PCB
D3,4,21,22 10E1
D8 TIB4B41
TR1 2SA490
TR2 2SC2383(O,Y)
TR3 2SA1115
E
VS-5 EG
VS-5 S
VS-5EGN
VS-5EO
POWER
SW901
SW902
VOLTAGE SELECTOR
INLET AC110/220V 50Hz
T901 VS-5-1B
16.0VAC
35.0VAC
25.5VAC
9.5VAC
8.4VAC
YLW
BRN
RED
BLU
ORG
WHT
GRY
J502 P502
J501 P501
F1 T1A
F2 T4A
F3 T500mA
F4 T1A
F5 T1A
C19 to 22 0.01(Z)
D1 M4B51
C23 to 26 0.01(Z)
D2 TIB4B41
TR11 2SD882(R,Q,P,E)
IC1 μPC1458
D16,17 10E1/RMIZ
TR12 2SA733(Q,P)
VR1 500
DC12V
B
VS-5 EK
T901 VS-5-3B
INLET AC200/240V 50Hz
S
VS-5EA
T901 VS-5-3BT
INLET AC200/240V 50z
T1
D14,15 10E1/RMIZ
TR13,14 2SA675(F,E)
TR15 2SC2383(O,Y)
TR16 2SC1815(O,Y)
TP2 (5V)
D18 HZ11-C2 HZ11-C1
D24 10E-1/RMIZ
POWER SUPPLY PCB KA240178C
J14 P14
IDLE-40V
IDLE 12V
IDLE 5V
HEATER
GND
DISPLAY PCB P46
ANT
RF IN
RF OUT
BOOSTER
RF CONVERTER
J504 P504
GND
AL 12V
BST 12V
IDLE 40V
P13 J13
J43
EE
IDLE12V
AL12V
IDLE-8V
IDLE5V
LINE F
SYSCON PCB J43
P9 J9
J42
VT
HI or LO
V or U
AFC
FINE
T.MUTE
SYSCON PCB P42
DEMODULATOR
P7 J7
J5
T.VIDEO OUT
T.A.OUT
REAR PCB P5
TUNER PCB
2SA1115
2SD882
2SC2383
2SA490
2SA675
2SA733
2SC1815
E C B
B C E
001215

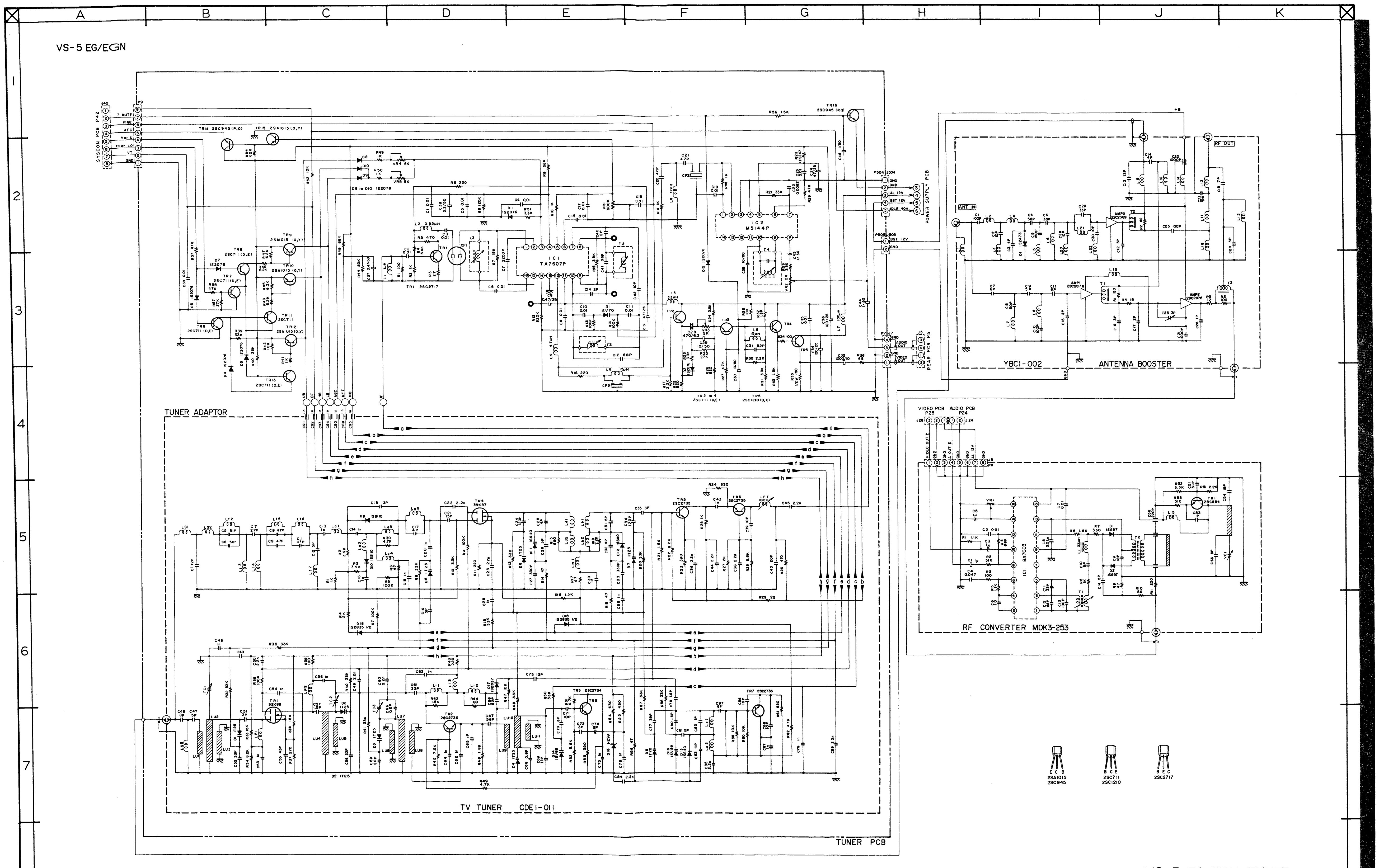
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50 WV(J)
(FS) = FAIL SAFE RESISTORS
POWER TRANSFORMER IS DIFFERENT
ACCORDING TO AREA.

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

VS-5 EG/EK/S/EGN/EA/EO
POWER SUPPLY
SCHEMATIC DIAGRAM

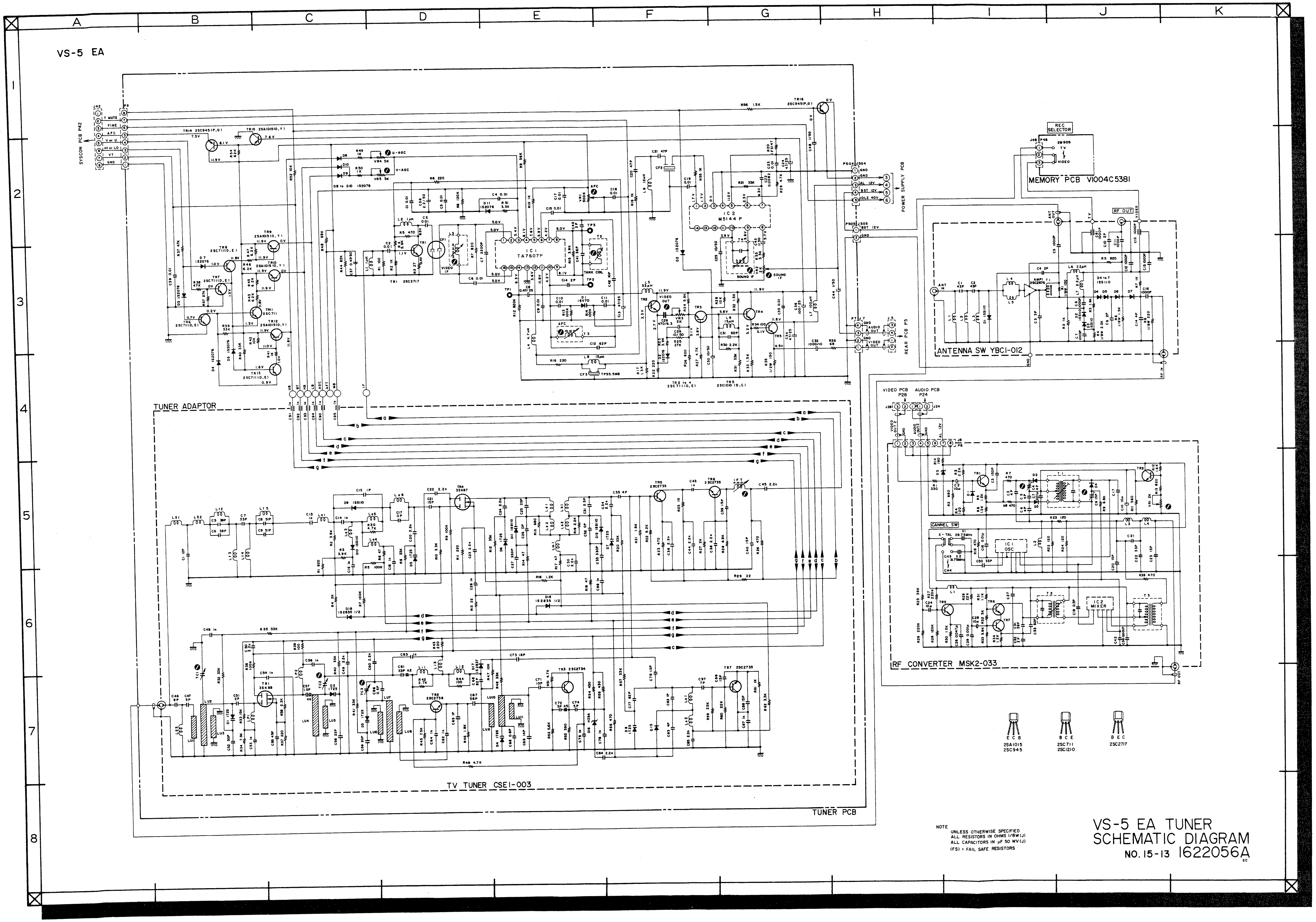
NO.15-11 1621645C
2C


A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
VS-5 EG/EGN
SYSCON PCB P42
J42
P9
T MUTE
FINE
AFC
Var U
Var L
VT
GND
TR14 2SC945(P,Q)
TR15 2SA1015(O,Y)
TR16 2SC945(P,Q)
D8 to D10 1S2076
IC1 TA7607P
IC2 M5144P
TR1 2SC2717
TR2 to 4 2SC711(D,E)
TR5 2SC1210(D,C)
P504 J504
GND
AL 12V
BST 12V
IDLE 40V
P505 J505
BST 12V
GND
POWER SUPPLY PCB
P7 J7
AUDIO OUT
VIDEO OUT
REAR PCB P5
ANT IN
RF OUT
YBC1-002
ANTENNA BOOSTER
AMP1 2SC2674
AMP2 2SC2676
AMP3 2SC2349
TUNER ADAPTOR
TV TUNER CDE1-011
TUNER PCB
VIDEO PCB P28
AUDIO PCB P24
J28
J24
J8
IC1 BA7003
TR1 2SC694
RF CONVERTER MDK3-253
E C B
2SA1015
2SC945
B C E
2SC711
2SC1210
B E C
2SC2717
001218A

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W(J)
ALL CAPACITORS IN µF 50WV(J)

VS-5 EG/EGN TUNER SCHEMATIC DIAGRAM

NO.15-12 1621646A
2C

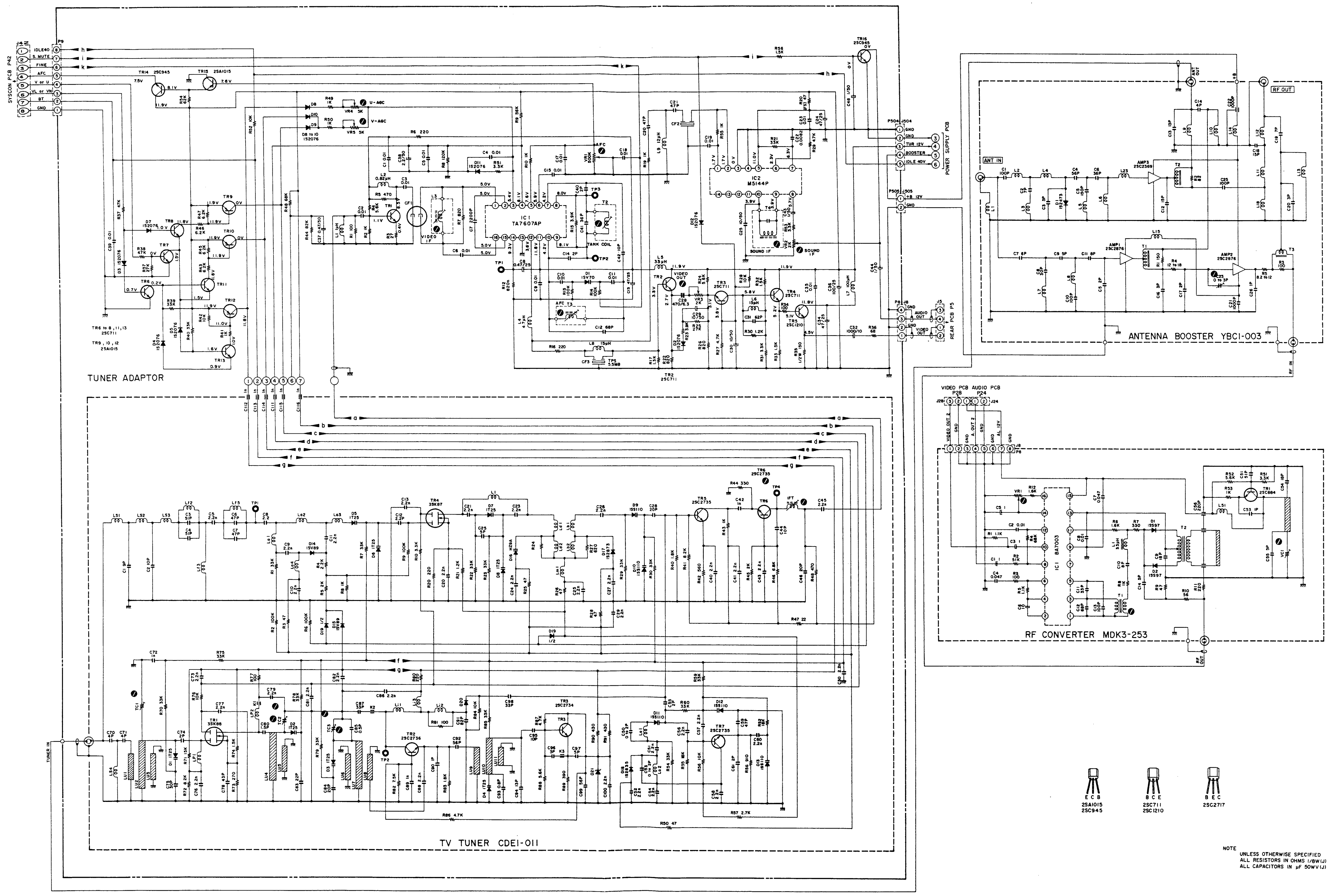

VS-5 EA
SYSCON PCB P42
TUNER ADAPTOR
IC1 TA7607P
IC2 M5144P
TANK COIL
AFC
VIDEO IF
SOUND IF
VIDEO OUT
POWER SUPPLY PCB
REAR PCB P5
AUDIO OUT
VIDEO OUT
REC SELECTOR
SW909
TV
VIDEO
MEMORY PCB V1004C5381
RF OUT
ANT
ANTENNA SW YBC1-012
VIDEO PCB P28
AUDIO PCB P24
CANNEL SW
IC1 OSC
IC2 MIXER
RF CONVERTER MSK2-033
TV TUNER CSE1-003
TUNER PCB
2SA1015 2SC945
2SC711 2SC1210
2SC2717
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W(J)
ALL CAPACITORS IN μF 50 WV(J)
(FS) = FAIL SAFE RESISTORS

VS-5 EA TUNER SCHEMATIC DIAGRAM

NO. 15-13 1622056A
2C

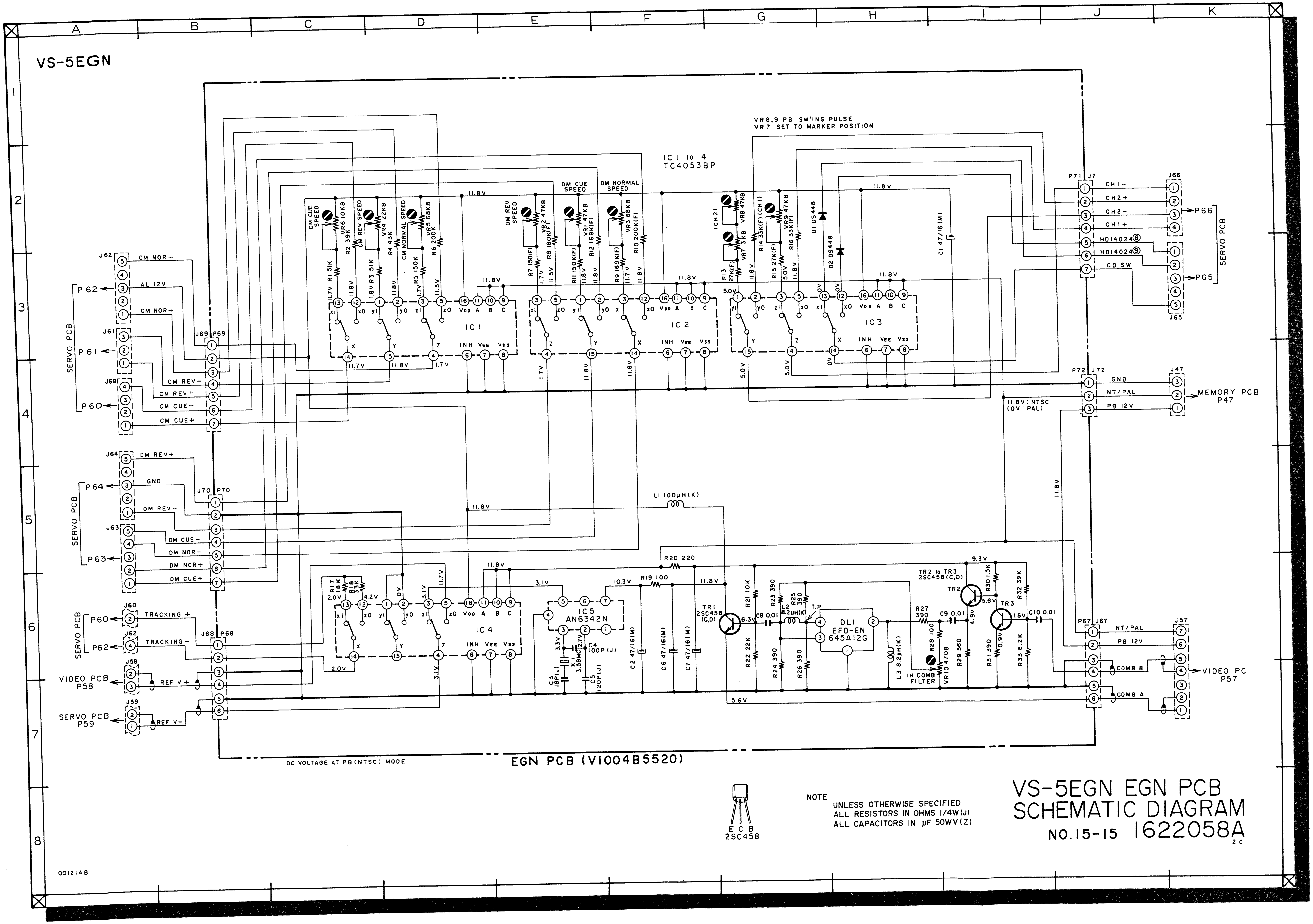
VS-5 EO


SYSCON PCB P42
IDLE40
S. MUTE
FINE
AFC
GND
TUNER ADAPTOR
IC1 TA7607AP
IC2 M5144P
VIDEO IF
TANK COIL
SOUND IF
AFC
POWER SUPPLY PCB
GND
TUR 12V
BOOSTER
IDLE 40V
AUDIO OUT
VIDEO OUT
REAR PCB P5
ANT IN
RF OUT
ANTENNA BOOSTER YBC1-003
VIDEO PCB AUDIO PCB
RF CONVERTER MDK3-253
IC1 BA7003
TV TUNER CDE1-011
TUNER IN
E C B
2SA1015
2SC945
B C E
2SC711
2SC1210
B E C
2SC2717

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W(J)
ALL CAPACITORS IN μF 50WV(J)

VS-5 EO TUNER
SCHEMATIC DIAGRAM
NO. 15-14 1622057A

001253


VS-5EGN
IC1 to 4
TC4053BP
VR8,9 PB SW'ING PULSE
VR7 SET TO MARKER POSITION
IC1
IC2
IC3
IC4
IC5
AN6342N
TR1
2SC458
(C,D)
TR2 to TR3
2SC458(C,D)
DL1
EFD-EN
645A12G
L1 100μH(K)
CM CUE SPEED
CM REV SPEED
CM NORMAL SPEED
DM REV SPEED
DM CUE SPEED
DM NORMAL SPEED
1H COMB FILTER
SERVO PCB
MEMORY PCB
P47
VIDEO PCB
P57
VIDEO PCB
P58
SERVO PCB
P59
CM NOR−
AL 12V
CM NOR+
CM REV−
CM REV+
CM CUE−
CM CUE+
DM REV+
GND
DM REV−
DM CUE−
DM NOR−
DM NOR+
DM CUE+
TRACKING +
TRACKING −
REF V+
REF V−
CH1−
CH2+
CH2−
CH1+
HD14024⑥
HD14024⑨
CD SW
NT/PAL
PB 12V
COMB B
COMB A
11.8V : NTSC
(0V : PAL)
DC VOLTAGE AT PB(NTSC) MODE
EGN PCB (V1004B5520)
E C B
2SC458
001214B

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(Z)

VS-5EGN EGN PCB SCHEMATIC DIAGRAM

NO.15-15 1622058A
2C